SUBCONSCIOUS PHENOMENA

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SUBCONSCIOUS PHENOMENA

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BY

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SUBCONSCIOUS PHENOMENA

Subconscious Phenomena

INTRODUCTION

THERE is at present no consensus of opinion, either among psychologists who deal with the normal, or among the medical psychologists who deal with the abnormal, as to the class of phenomena to which the term "subconscious" shall be applied, or, as to the interpretation of these phenomena. Thus, few writers mean the same thing by "subconscious," and even when two writers agree upon the same psychological interpretation of given phenomena each is likely to describe different sets of phenomena under the term. It has seemed accordingly to the Editor that a symposium in which those who deal with the normal and abnormal might thresh out the difference of views would be timely and might help to an agreement in terminology at least and possibly in interpretation.

The following general statement of the

present terminology and meaning of the subconscious will be of assistance to the general reader in following the discussion in this and the next number. Professor Münsterberg has very clearly stated the three dominant theories of the subconscious backed respectively by laymen, physicians and psychologists, and it is well that these three be kept well in the foreground of the discussion. Perhaps these three types are sufficient for a discussion in a symposium, and yet, there are three other meanings of the subconscious, one or other of which is held by individual writers and of which the reader should be reminded at least. These six may be summarized thus: First, it is used to describe that portion of our field of consciousness which, at any given moment, is outside the focus of our attention; a region therefore, as it is conceived, of diminished attention. Subconsciousness here, therefore, means the marginal states or fringe of consciousness of any given moment, and the prefix *sub* designates the diminished or partial awareness that we have for these states out in the corner of our mind's eye.

The second meaning (Professor Münster-

berg's second type) involves a theory which is an interpretation of the facts. It is with this meaning particularly that the term is used in abnormal psychology. Subconscious ideas are dissociated or split-off ideas; split off from the main personal consciousness, from the focus of attention—if that term be preferred—in such fashion that the subject is entirely unaware of them, though they are not inert but active. These split-off ideas may be limited to isolated sensations, like the lost tactile sensations of anesthesia; or may be aggregated into groups or systems. In other words, they form a consciousness coexisting with the primary consciousness, and thereby a doubling of consciousness results. The split-off consciousness may display extraordinary activity. The primary personal consciousness as a general rule is of course the main and larger consciousness; but under exceptional conditions, as in some types of automatic writing, the personal consciousness may be reduced to rudimentary proportions, while the secondary consciousness may rob the former of the greater part of its faculties and become the dominant consciousness.

The third meaning (Professor Münsterberg's first type) is an elaboration and extension of the second, and thus becomes a theory which not only gives an elaborate interpretation of the facts of observation, but becomes a broad generalization in that it propounds a principle of both normal and abnormal life. Under it the dissociated states become synthesized among themselves into a large self-conscious personality, to which the term "self" is given. Subconscious states thus become personified and are spoken of as the "subconscious self," "subliminal self," "hidden self," "secondary self," etc.; and this subconscious self is conceived of as making up a part of every human mind, whether normal or abnormal, and is supposed to play a very large part in our mental life. Thus every mind is double; not in the moderate sense of two trains of thought going on at the same time, or being engaged with two distinct and separate series of actions at the same time; or even in the sense of there being certain limited discreet perceptions of which the personal consciousness is not aware; but in the sense of having two selves which are often given special domains

of their own and spoken of as upper and lower; the waking and submerged selves, etc. This theory, therefore, not only extends the principle of dissociated ideas into normal life and makes these constant elements of the human mind, but enlarges the subconscious synthesis into something that is self-conscious and which can speak of itself as an "I."

The fourth meaning of subconscious is that which by definition would have it include; first, the dissociated ideas embraced under the second definition above stated; and seccond, all those past conscious experiences which are either forgotten and can not be recalled, or which may be recalled as memories, but for the moment are out of mind because in the march of events our thoughts have passed on and we are thinking about something else. All these potential memories are placed in the subconscious which plainly is thus made to define two classes of facts; namely, dissociated states which are active, and those which are inactive, *i. e.*, forgotten, or out of mind (Sidis' definition).

The fifth use of the term (Myers' doctrine) is an expansion of the third meaning and involves a metaphysical doctrine which

transcends all facts which one can possibly observe in others or introspect in himself. It is more specifically described as the "subliminal," which is used as a synonym for subconscious. The subconscious ideas, instead of being mental states dissociated from the main personality, now become the main reservoir of consciousness and the personal consciousness becomes a subordinate stream flowing out of this great storage basis of "subliminal" ideas as they are called. We have within us a great tank of consciousness but we are conscious of only a small portion of its contents. In other words, of the sum total of conscious states within us only a small portion forms the personal consciousness. The personal self becomes even an inferior consciousness emerging out of a superior subliminal consciousness sometimes conceived as part of a transcendental world, and this subliminal consciousness is made the source of flights of genius on the one hand, while it controls the physical processes of the body on the other.

The sixth meaning (Professor Münsterberg's third type) of the term is an interpretation on pure physiological principles of the

phenomena customarily attributed to the activity of dissociated ideas. Some psychologists believe that phenomena like automatic writing and speech, the so-called subconscious solution of arithmetical problems, hysterical outbursts, etc., can be best explained as pure neural processes unaccompanied by any mentation whatsoever. These phenomena become therefore pure physiological organic processes of the body. The term subconscious thus becomes equivalent to the old theory of Carpenter's "unconscious cerebration.

CHAPTER ONE

BY HUGO MUNSTERBERG

Professor of Psychology, Harvard

THE few pages which a symposium allows do not give opportunity to sift the material which has led to the doctrine of the subliminal consciousness. My practical studies in hypnotism, hysteria, automatic writing and similar abnormalities suggest to me decided hesitation in accepting the whole of the usual evidence without cross-examination. And yet, to find a common basis for a theoretical inquiry, it certainly seems wiser not to quarrel about the experiences but rather to accept the facts as the most sanguine observer might present them.

Yet, even if we welcome the observed facts in their widest limits, there can be no doubt that the subconscious itself is never among them. The facts which we find must be either conscious psychical facts from which we draw inferences as to subconscious psychical

states, or physical expressions which cannot be explained by conscious ideas, emotions, volitions, and which thus demand not-conscious factors for their explanation. The conscious experience of crystal-vision or of remembering the tactual experiences of an anaesthetic hand or the sudden solution of a problem which had slipped from consciousness, or, if you will, every act of genius may point to such hypothetical subconscious processes, but certainly the conscious seeing and remembering and solving is given, while the subconscious is constructed for purposes of explanation. In the same way the physical processes of automatic writing or of hysteric action are observable; the subconscious agencies are super-added elaborations.

To acknowledge that the subconscious is found only through constructions in the service of explanation does not detract from its scientific reality; the fluid core of the earth is of the same logical type. But such acknowledgment does imply that the only correct question is this: which of the many constructions of the not-conscious causes is most useful for the explanation of the observed facts? It is evident, however, that the preference

for one construction or another may and must be influenced by various sidefactors. When, for instance, the physician approaches those facts, his interest tends naturally to their practical treatment. He thus shapes his constructions in a way which brings the differences from normal mental life to the clearest relief and which offers a simple working description, definite enough to determine beforehand the events to be expected in the behavior of the patient. When on the other hand the layman comes to the same facts, he is struck by their surprising character and this wonder awakes the feeling of the general mysteriousness of the world; he thus tends to prefer a construction which explains the observed facts in a way that leads at the same time to the satisfaction of higher desires, perhaps even of religious emotions. When, finally, the theoretical psychologist approaches the same facts, he has in mind no therapeutical treatment or emotional demand, and yet he too looks out far beyond the curious facts themselves; his interest is turned toward the remainder of mental life, and he thus prefers explanations which bring the abnormal facts in closest relation to the

normal processes and cover both by the same formulae.

We therefore find three types of theories, the first backed mostly by laymen, the second by physicians, the third by psychologists. Yet the lines are not to be drawn sharply. That first group says: the subconsciousness is the psychical system of a full real personality below the conscious person; that subconscious self remembers, thinks, feels, wills on its own accord, influences our conscious life, helps it out, shines through it and causes the abnormal facts. The popular mind clings to such a convenient method of explanation the more closely as it is on this basis easy to bring the subconscious selves into telepathic connection or to link them with mystical agencies. The second group says: the subconscious is psychical but not a system, it is made up of ideas, but they do not at first form a personality; it is dissociated split off mental material which only in a secondary way may flow together into a new detached self. The subconscious is then not at all a regular psychical foundation but something either pathological or at least artificial. The third group, finally, says: the subconscious that underlies the ab-

normal facts is the same that underlies the ordinary processes of memory, attention, etc.: it is not psychical at all but a physiological brain process.

The emotional demands of the mystic, the practical demands of the physician, and the theoretical demands of the psychologist are well fulfilled by these three types of theories, and to a certain extent they can be helpful side by side; the purpose which we have before us determines each time which of the three modes of construction is most useful for our special end. At least the second theory finds points of contact with each of the others. With the first it shares the belief that the subconscious is psychical, while the one conceives it as systematized, the other as dissociated. With the third it shares the conviction that there is no independent self below the consciousness, while the one calls the underlying processes psychical, the other physiological. This latter difference does not deter the friends of the second theory from admitting also a physiological basis for the subconscious ideas, nor the adherents of the third theory from using psychological terms like idea, emotion, volition, for the short de-

scription of those complex physiological events as if they were accompanied by psychical phenomena. Yet, the difference of principle remains, and if I have to choose, I feel inclined to take the place with the psychologists in the third group; the subconscious is not psychical at all.

I point here only to the most general reasons which determine my decision. The explanations which every theory of the subconscious offers are twofold. There is firstly a reservoir which keeps the subconscious ideas, and secondly a mental workshop which manufactures the products of thought as far as they are not elaborated consciously. The reservoir, full of dissociated ideas, has to explain the occurrence of strange conscious ideas and of otherwise surprising behavior. The workshop has to explain the conscious results of the evidently synthetic labor which goes on independently of our conscious control. What is that reservoir? Of course, if we call it a reservoir of ideas we have yielded the whole point; ideas are of mental stuff. Students of abnormal psychology here indulge in the same type of circular conclusion which is frequent with animal psychologists.

The latter reason that animals of a certain development must have consciousness because they have memory. Memory is of course a psychological expression, and the question is just whether the behavior of those animals has to be explained psychologically by memory or physiologically by an after-effect of earlier stimulations. The decision whether the one mode of explanation or other is to be applied cannot itself be deduced from the observed facts, but must precede the study of the facts; with other words: the question whether animals have consciousness or not cannot be answered by observation but belongs to epistemological arguments. In the same way here; no fact of abnormal experience can by itself prove that a psychological and not a physiological explanation is needed; it is a philosophical problem which must be settled by principle before the explanation of the special facts begins.

To make the explanation dependent on the special abnormal facts is the more unjustified as the situation is in no way different from that of ordinary memory. If I reproduce by association a name or a landscape seen ten years ago I can postulate too that all this was

lying in me as a subconscious idea or at least as a mental disposition and that it could not be reproduced if something on the psychical side were not lasting through those ten years outside of my consciousness. But those who insist that the memory idea presupposes a lasting mental disposition and cannot be explained by physiological after-effect, only forget that the same logic would demand a special mental disposition also for each new perception. The whole "mystery" of an idea entering into consciousness presents itself perfectly every time when we use our eyes or ears, and it is astonishing how easily psychologists overlook the parallelism of the problems in regular perception, in ordinary memory and in the abnormal awakening of dissociated ideas. To say that the perceptive idea too finds a special psychical disposition would be absurd, as we should then need such subconscious mental agency for every possible impression, and if every possible impression is equally prepared in the subconscious the appearance of no one would really find its explanation as every other would have the same chance. In the case of the perception we are thus obliged to rest in the explanation

of a psychical idea by a physical brain process only. But if the fresh idea is dependent only on the fresh excitement in the brain, there is not the slightest additional difficulty in interpreting by the same principle the recurrent idea of memory by the recurrent brain process without any reference to a lasting psychical trace. And if the normal memory can work without subconscious mental help, there is no reason suddenly to presuppose it for the abnormal awaking of apparently unaccountable ideas as in crystal vision and a hundred similar phenomena. The illusions of the ordinary memory easily lead over from the normal reproduction to the pathological. Brain processes without subconscious psychical forerunners furnish all that we need in the abnormal cases for the same kind of understanding which science has for seeing and hearing.

But if we have no reservoir with stored-up subconscious ideas, we cannot have a workshop either to prepare therein subconsciously combinations of subliminal material. It is again the physiological action which is entirely sufficient to explain just as much as the mental mechanism could explain. Of course

popular science turns naturally to psychical conceptions first, because those hidden processes which we must presuppose to explain the conscious results are thoroughly purposive and selective. But have we really a right to insist that purpose and selection refer necessarily to psychical factors and are incomparable with physiological processes? On the contrary, whenever purpose means as it does mean in this case a certain adaptation to the ends of the individual we must acknowledge that every organism shows such purposiveness. When the body digests a meal a hundred thousand cells are performing the most complex acts for the purposes of the organism, and they select the right chemical processes more safely than any chemist would be able to do; yet nobody presupposes that there is a mental interplay in the intestines. In the same way all the other tissues are performing adjusted acts by physiological causes: have we any reason to expect less from the tissues of the central nervous system? Why cannot they too produce physiological processes that lead to well-adjusted results and that means to apparently purposive sensorial excitements and motor im-

pulses. But we must go much further still. Not only that the physiological cerebration is well able to produce the "intellectual" result, but the physiological side alone is fit for it, the psychological is utterly unfit. To the popular mind that statement seems of course absurd, and indeed it needs some philosophical insight into the logic of sciences to appreciate the situation. To bring it to short formulation, of course without full argument, we might characterize it as follows. Our inner life is a system of attitudes, of purposes, of will. But it is not for psychology to deal with the inner life in its immediate teleological reality. This real life and its real inner connectedness demand for their understanding our interpretation and appreciation it is furnished for instance by the student of history or of philosophy. Psychology, on the other hand, is a science which aims at description and explanation of inner life, a logical attitude which is artificial. Psychology considers the inner experience ,therefore, for its special purpose as a series of describable phenomena; it transforms the felt realities of will into perceivable objects, into contents of consciousness. Through this transformation

the real purposiveness, yes, the whole inner connection of the will acts is eliminated; the psychological phenomena as such have no intentions and no significance any more but are merely bits of lifeless mental material, complexes of unphysical objects made up of elements which we call sensations. And this material which, through the objectification, has lost all its inner teleological ties, has not even the chance to enter into any direct causal connections. The physical phenomena can and must be conceived as causally connected, the psychical not. There cannot be causality where the objects do not last but are destroyed in the very act of their appearance; just this is characteristic of all psychological contents. The world is physical, in so far as we conceive it as identical with itself in ever new experiences, and to elaborate this self-identity of the material universe is the meaning of the causal treatment. The object is psychical just in so far as it is not identical in new experiences, but is created anew in every act. Therefore there is no direct causal connection of the psychologized inner life; therefore there is only an indirect causal explanation of psychical phenomena

possible in so far as they can be conceived as accompaniments of physiological processes. In short, even the full conscious mental facts do not really hang together when viewed from a psychological point of view and are thus unfit to explain any results through their causal interplay; they are epiphenomena, and the causal working of the objectified conscious facts goes on in the physiological substratum. How misleading, therefore, to invent and to construct subconscious psychical phenomena for the express purpose of producing causal results instead of leaving that to the safe action of the cerebrum. The only motive for doing it is the popular confusion, —certainly not unfrequent even among psychologists,—which does not discriminate between the psychological material as part of the world of phenomena and the teleological significance of our inner life in the world of meaning. The will as purpose binds by its meaning the facts of immediate life together and enters as such into ethics or law or history, but the will as psychological content of consciousness does not bind anything and does not point to anything beyond itself; it is simply a passing phenomenon. And yet only

in this unreal form, constructed by abstractions and conceptions, the will can enter into the system of descriptive and explanatory science. In the explanatory system of psychology the purpose as such does thus not explain anything, just as astronomy has learned that the sixteenth century mixed the categories when the beauty of certain astronomical curves was taken as the actual cause for certain astronomical movements.

There is thus no reason to conceive a psychical fact existing outside of consciousness, —and that corresponds to the only significant meaning of consciousness. Consciousness is nothing which can be added to the existing mental facts, but it indicates just the existence of the psychical phenomena. Consciousness cannot do anything, cannot look here and there and shine on some ideas and leave others without illumination. No, consciousness means merely the logical relation point of its contents; the psychical phenomena are in consciousness as the physical phenomena are in nature; there cannot be physical phenomena outside of nature. Seen in this way the psychologist must sharply separate those pathological cases which really show posi-

tive abnormal phenomena in the conscious facts themselves and those which from the standpoint of consciousness present negative occurrences only,—blanks where ideas are expected. To the first class belongs, for instance, the alternating personality; that is an abnormal grouping of psychical experiences. To the second class belong all those various phenomena which give rise to the theory of dissociated or automatic subconscious psychical processes. The dissociated idea is psychologically not existent just as the ticking of the clock in my room does not exist for me when my attention is turned to my reading; the ticking reaches my brain and may there have after-effects, but the sound-sensation is inhibited. In this way all that which suggested the theory of the mental subconscious becomes simply increased or decreased inhibition. Why the mental accompaniments of certain physiological processes are sometimes inhibited must of course itself be explained physiologically; everything seems to point to the relation between sensory excitement and the openness or closedness of the motor channels of discharge.

It is true that such physiological explana-

tion gives small foothold for that mystical expansion of the theory which seemed so eas ily reached from the subconscious mental life. But it is not the least merit of the scientific physiological explanation that it obstructs the path of such pseudophilosophy. Psychology even if it takes in psychological phenomena which lie under the cover of the subconscious, can never be the starting point for a metaphysical view of reality because, as we pointed out, the psychological material has been reached by an artificial transformation of the real life experience. The psychological phenomena are as unreal as the atoms which mathematical physics constructs for its logical purposes. If we seek real philosophy we must go back to the true immediate will experience out of which the psychological constructions are shaped but which is as such not possible object of description. An interpretation and appreciative understanding of this real life, even in the most idealistic philosophy, can then never conflict even with the most radical physiological explanation of abnormal psychology. The physiological psychologist thus ought carefully to avoid the language of the subliminal self theory as it

flows over too easily into antiphilosophy. But he has no reason to avoid the language of the dissociated-idea, theory—provided that the psychological word is taken as a short label for the very complex neural physiological process. If I had to write the history of Miss Beauchamp I should conceive all subconscious processes in physiological conceptions, but I should describe them, for clearness and convenience sake, as the master of our symposium has so masterly done, in the terms of psychological language.

CHAPTER TWO

BY THEODORE RIBOT

Professor of Psychology, Collège de France

THE question of the subconscious is so broad, so complex and so obscure that I shall be content if, in the brief remarks which follow, I succeed in throwing even a little light upon it.

In this question we must distinguish two sides: the positive, composed of facts; and the hypothetical made up of theories.

With regard to the facts, I find it advantageous to establish two categories:

First: The *static* subconscious, comprising habits, memory and, in general, all organized knowledge. It is a state of conservatism, of repose (albeit relative), since representations undergo incessant corrosions and metamorphoses within themselves.

Second: The *dynamic* subconscious which is a latent state of activity, of incubation and elaboration. Authors who have treated this

subject, have furnished examples of it in profusion. From this source comes inventive work, inspiration in all sorts of discoveries, improvisation and even—to a feebler degree and in a more modest form—sudden repartee and *bons mots;* in short everything which sparkles forth from us spontaneously.

Naturally, discussion and conjecture have focussed by preference upon the subconscious processes we call "dynamic," since these are the most varied and the most fertile in results.

On the nature of this subconscious activity, however, one finds only discord and obscurity. "Doubtless, one may maintain that, in the case of the inventor, everything goes on in the subconscious as it does ordinarily in consciousness itself, barring a message which does not reach the *ego;* that the work which one may follow in consciousness, with its advances and its retrocessions, is identical with what goes on without our knowledge. Such an hypothesis is possible, but far from proved.

Again, concerning the essential nature of subconscious activity, two diametrically opposed theories have been put forward:

The first (Myers, Delboeuf and other more recent authors) bears the stamp of a peculiar biologic mysticism. According to these authors, in certain men subconscious activity is invested with almost supernatural power, not only of a trophic and physiologic, but also of a psychologic order, and constitutes in the individual an intermediate link between the human and the divine.

The second, which has attained its most complete expression in Boris Sidis' book on suggestion, draws this picture of our subconscious, which is far from flattering: it (the subconscious) is stupid, uncritical, extremely credulous, without morality, and its principal mental mechanism is that of the brute—association by contiguity.

In my opinion two such hypotheses are not at bottom irreconcilable, since the above advantages and defects make an integral part of human nature taken in its totality, and since they are unequally distributed among men. A much more important question, however, is that of the ultimate nature of subconscious activity. Although many authors have tried to evade it by enveloping it in obscurity and doubt, it comes back to this inex-

orable dilemma,—psychologic or physiologic?

The psychologic solution rests upon an equivocal use of the word *conscious*. The conscious bears an unvarying stamp: it is an internal event, which exists, not in itself, but for *me* and in so far as it is recognized by *me*. Now, this solution admits that, if from the clear realm of consciousness one descends to the "marginal" consciousness and finally continues to go lower and lower to the unconscious, which only manifests itself by motor reactions, the primitive state thus impoverished continues to remain to the end identical in its essence with the conscious. Underlying the psychologic theory, in all its forms, there is the tacit hypothesis that the conscious is assimilable to a quantity which may decrease indefinitely without ever reaching zero. It is a postulate which nothing justifies. The experience of psychophysicians with regard to the "threshold" of the conscious, without settling the question, would rather justify the contrary opinion: the perceptible *minimum* appears and disappears brusquely. This fact and others which might easily be pointed out seem to me un-

favorable to the hypothesis of the increasing or decreasing continuity of the conscious.

The physiologic solution is simple and comprises few variants. It maintains that subconscious activity is purely cerebral; the psychic factor which ordinarily accompanies the work of the nervous centres is absent. I incline toward this hypothesis, without disregarding its shortcomings and its difficulties; but, at least, it seems to me not contradictory as is the adverse hypothesis. It has been established by numerous experiences (Féré, Binet, Mosso, Janet, Newbold, etc.) that unconscious sensations (not apperceived) act, since they produce the same reaction as conscious sensation, and Mosso has been able to maintain "that the testimony of consciousness is less reliable than that of the sphygmograph," but there are cases more complex. For instance, that of invention is quite different, for it does not merely suppose the adaptation to an end which the physiologic factor would suffice to explain; it implies a series of adaptations, corrections, and rational operations whose nervous action of itself furnishes us but few examples. In spite of everything, I am coming more and

more to the side of the physiologic hypothesis and am quite in accord with the opinion recently set forth in America by Jastrow, and more clearly by A. H. Pierce in his "Studies in Philosophy and Psychology" (1906), in which he has presented in favor of the cerebral interpretation such an excellent plea that further attempts in this line seem to me useless.

There still remains the question of double personality, or to be more exact, of multiple personality.

At the present time the majority of psychologists admit that the *ego,* the person, is a synthetical complex, which in its normal state, is made up of relatively stable elements, in spite of incessant variations. In the abnormal cases, when a new personality arises, one can scarcely doubt that the subconscious lends its aid to its formation; on the one hand, in its static form, by the resurrection of habits or of memories which seemed lost; on the other hand, in the apparition of intellectual or moral dispositions—higher or lower, good or evil,—which, latent until then, characterize the new *ego.*

This psychologic problem is nevertheless

quite different from that concerning the nature of the subconscious. This new synthesis, of which the subconscious furnishes only the materials (and these only in part), depends upon profound causes, probably physiologic, having their roots in cenesthesia. Whatever opinion one may emit upon this last cause, it is a distinct study which begins here; subconscious processes play a rôle which is secondary and subordinate and are, properly speaking, a result, an effect.

CHAPTER THREE

BY JOSEPH JASTROW

Professor of Psychology, University of Wisconsin

TO one who has devoted a volume* to an exposition of subconscious phenomena, the invitation to contribute to a symposium is naturally interpreted as a request for a statement of the underlying and supporting conceptions of the work in question. The difficulty in meeting this request is inherent in the phenomena themselves; for it is the nature of these to require delicate shadings and gradings and all the complex blendings of a difficult chiaroscuro, in order to shape the resulting delineation into a significant picture. Yet when addressed to those who are familiar with the picture and its *genre,* and equally with the elements and

*The Subconscious. Part three is especially germane to the considerations here presented.

the technique of the composition, a sketch with reënforced contours and unconcern for transitions and corrections will meet with ready interpretation.

I deem it a fundamental requisite of any adequate conception of the subconscious that it makes vital connection with the ordinary range of normal mental procedure, finding a natural place in an evolutionary interpretation of psychic function, and interpretable likewise in (general) terms of neural disposition. Such conception finds an equal obligation to discover and decipher within the range of normal fluctuations, a great diversity of relations,—of excess and abeyance, of distortion, temperamental facilitation and exaggeration and impediment,—that suggest unmistakably the minor abnormalities of subconscious function. It is difficult to overemphasize the significance of this intermediate realm. There are to be sought the sources of the streams, whose waters in turbulent confusion break through their normally confining channels in seeming *lusus naturae.* With these obligations fairly met, the conception may confidently yet tactfully enter the perplexing field of the abnormal, and in so

doing will be disposed to emphasize once more the transitory, superficial, introspectively controllable procedures, that in their estrangement maintain some correspondence, —fragmentary, uncertain, elusive, or even incoherent in part though it be—with the normal home relations. Thus rooted firmly in normal procedure, the conception may undertake the special analysis of the complexly abnormal.

The aspect of the resulting conception would admittedly be seriously altered if it should prove necessary in order to account for the abnormal varieties of experience, to assume a system of psychic relations in enlargement or correction of those seemingly adequate for normal psychology, and then in turn to revise the current psychological conception by a restatement in the light of the abnormal. Those who feel themselves forced by logical considerations or impelled by temperamental or philosophical preference to have recourse to such a remodeling of psychological relations have for the most part—and with wide diversity among themselves—proposed some form of secondary consciousness, coördinate or subordinate *al-*

ter ego, subliminal self. Finding, notably in cases of disordered personality, a system of mental possessions and facilities seemingly out of relation to those of the normal self, they have concluded that there must regularly be such psychic satellites in the orbit, the presence whereof is not created but only revealed by a favoring eccentricity. They point out the notable range of experience, difficult of explanation, which the supposition of such a psychic relation might illuminate; and argue that any supposition that dispenses with such a psychic co-partner must in turn resort to devious assumptions to include within its explanatory scope the aforesaid divergent experiences.

For the tendency of this "dualistic" hypothesis to make alliance with extreme and gratuitous assumptions, the scientific formulation thereof need not be held accountable.[1]

[1]The argument from alleged supernormal powers in freedom from or violation of accepted physical and mental limitations, the psychologist is hardly called upon to consider; though its actual prominence in the literature will excuse the comment that such use of the hypothesis but imposes an additional burden to be borne, and does not contribute to the logical force of the argument. To one firmly convinced of the truth

The mass impression of the realm as of the detailed features, the entire trend of psychological investigation and of so much of insight as illumines psychic procedure, seems to me overwhelmingly and consistently to bear against any such assumption, even when most objectively and logically shaped. Here the ways divide. While investigation and accumulation of data may proceed profitably without raising this issue, systematic interpretation cannot go far without revealing the formative trend of the underlying conception. To me the subconscious is psychologically significant and logically defensible only under some form of concept that clusters about the organic unity of the mind, and from such a base surveys in orderly sequence of relation, the divergent realm of minor and major abnormalities.

The explanation of subconscious procedure under this unitary conception is still beset with hypothesis; the sketch thereof made by any one artist inevitably reflects a favorite perspective, an allegiance of school and meth-

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of the "supernormal" data, the entire physical and mental world—quite as legitimately as the subconscious—may require an entire reconstruction.

od. Fundamentally the range of subconscious function must find a place in the mental system by reason of fitness or use, reënforced and developed by evolutionary influences, ultimately of a highly intricate nature. The degree as well as the manner of feeling-awareness[2] that attaches to functions that may qualify for a place in the psychic system is conditioned by the value of such an accompaniment or privilege in the functional efficiency. Fundamentally the subconscious status of certain functions is an expression of the mode of their representation in the physiological and psychological economy. It is a fact that influences in the shape of all sorts and conditions of stimuli, play upon the neuro-psychic equipment and modify its expressive behavior. If the reactions to such stimuli demanded an equable distribution of feeling-awareness throughout their range, there would be no provision (or a very different one) for subconscious functioning. The distribution of awareness as attaching to higher and lower, reflex and simply automatic and

[2]At times a neutral term without the inevitable implications of "consciousness" is useful. For this I suggest feeling-awareness.

automatically familiarized behavior, sets forth this relation; as, again, direct experimentation by an "impressionistic" response to aspects of stimuli equalized beyond explicit differentiation or recognition corroborates the result.

The analysis of subconscious procedure acquires additional complexity through the inherent many-sidedness of acquisition and expression. Through the facilitation brought about by experience, a lesser degree of awareness, a suppressed variety of its presence, accompanies—the sensitiveness to and the interpretation of outer stimuli as well as the voluntary aspect of the response (initiative). An equally important determinant is the distribution of the attentive attitude, in itself a fundamental factor of the psychic procedure. Peculiarly prominent in all is the will-like, consenting aspect of the incorporative process, by virtue of its intimate affiliation with the personal flavor of conduct, as through the selection and direction and integration of experience, a self emerges, matures and expands.

When the direction of interest in subconscious functioning is shaped towards an in-

clusion of abnormal relations, there are other obligations to be met. My exposition indicates my conviction that the conception thus emerging from the study of the normal legitimately and fairly applies to the abnormal field. The most instructive variety of the domestic species revealing relatively pronounced or independent subconscious functioning, I find in the diversified lapses popularly termed absent-mindedness. Though evanescent and superficial, the disengagement of the normally accompanying "privileges" of complete consciousness presented in such cases, and again their amenability to analysis constitutes this domain a peculiarly instructive example of what is meant by the subconscious in working trim. It is equally fortunate for the comprehension of the abnormal that so intrinsically abnormal a procedure as dreaming should be so common; and this both as furnishing a familiar alteration of mental state (physiologically conditioned), and as revealing the normality of the easy-going, revery-like, streams of mental occupation that constantly and characteristically contribute to the psychic life.

The variants of dream states, the drug in-

toxications, trance and hypnosis present analogies of release, impairment and rearrangement of function in further extension of dreaming and mental abstraction. Abnormality in these regions is a shifting matter and centers about the orientation of the subject to his environment. Such orientation is variously interfered with by the invasions of projections from the inner world (analogous to those of trance, hypnosis, delirium, drug intoxication), or by the allied alternations and entanglements of rival syntheses of experience (multiple personality and the like). Such dissociations frequently betray their origin in subconsciously assimilated experience, and their growth by a like disenfranchised rumination, while differently instructive, are the more sudden curtailments of distortions of orientation in disintegrating lapses, not uncommonly of a "shock" origin. Throughout this series the type characteristics far outweigh in importance the vagaries of detailed manifestations, while the analyses of retention to loss, of one conscious synthesis to its rival (notably in the hysterical anaesthesias) are peculiarly significant in their revelation of the standard *modus operandi* of

the abnormally subconscious, of the intercourse between dissociated groupings of function.

The fundamental difficulties surrounding this aspect of the conception are two: (1) the synthesizing of the products of such functioning into seceding systems (not merely sporadic states); (2) with or without such synthesis, the extreme elaboration of the products in specialized directions. Popularly this dual difficulty appears in the willingness to admit that absent-mindedness, dreaming, and simple suggestion are amply accounted for by a normally related conception[1] of sub-

[1]The most baffling group of subconcious facilities of a clearly normal type are the operations of arithmetical prodigies and related proficiencies. The determination of the status of these is a definite obligation which psychology has not yet met. There are beginnings and a few notable analyses; in the main, the results seemed to me so unsatisfactory that I was reluctantly compelled to all but omit them from my survey. I believe that in suitable cases the application of the methods used in cases of shifting personality, to the procedures in calculating prodigies, will reveal a more intimate insight into the subconscious facilitating steps, and that these will conform to the general conception here advanced. The investigation seems at all events desirable and promising.

consciousness, but that trance states (like those of Mlle. Helène Smith) and conflicting personalities (like the case of Miss Beauchamp) remain enigmatic. Hence it is well that explanation should be addressed to the rational or imaginative elaboration, and to the "doubling" or rival, seceding, or detached synthesis. The inherent difficulty of each phase lies in its participation in the other. The creative effort in Mlle. Smith's Martian extravaganza astonishes by its appearance as the work of a handicapped phase of her consciousness; the ingenious tantalizings of "Sally" are remarkable because directed against and concealed from another phase of her being. Yet once the dissociated-mindedness be admitted, a further complexity of its application seems no serious obstacle to its admission; and particularly is it to be recognized that this pyschic synthesis can not only draw upon the reservoir of the common consciousness, but as well assimilate in like partial incorporation experiences of its own. The widening detachment (doubling) results accordingly from the capacity of the dissociated consciousness to shape its orientation (not alone its memory resources) by its own

contracted model. I have attempted to show that the status thus resulting is of one type or another according (mainly) as the "fault" thus arising is genetic (Miss Beauchamp) or is disintegrating (Mr. Hanna),—the latter the more suggestive of definite physiological variation. In each the demonstrated though gradual and hard-won fusion points to the underlying unity despite temporary psychological (or physiological) barrier, as do also the occasional spontaneous intercourse between one realm and the other and the artificially encouraged *pour parlers* upon a neutral ground. In fine, the added complication of these admittedly perplexing embodiments of dissociated functioning do not constitute a warrant for a distinctive hypothesis, but suggest a warranted extension of the conception of dissociation as applied to more common and regular phenomena. That the conception of dissociation must be shaped to include these is obvious; and the chief importance of further data lies in the hope that they may render more precise and explicit the connotation of that uniquely significant term in modern psychology.

While pleading for the regulative val-

ue of normal psychological conceptions for the study of abnormal psychology, I am as ready to derive from the latter pertinent applications to the former, in theory and practice alike. The dictum that the grosser and more pronounced abnormalities are but common deficiencies writ large works both ways. The frequent existence of restraining and impeding influences of a subconscious order in normal individuals follows directly from the central position. The release of these by appropriate mental therapeutics is thus justified as practical procedure by reference to the analyses and again to the practical results in pronounced and wayward hysteria and in genetic and disintegrating lapses of personality. In such justification lies a legitimate phase of popular and professional interest in the conception of the subconscious. Here as elsewhere, wise practice will wait upon sound theory.

CHAPTER FOUR

BY PIERRE JANET

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YOU have set me quite a difficult task and one which I hardly feel capable of accomplishing to your entire satisfaction. You ask me to take a stand with regard to the metaphysical theories which are developing today and which seem to have for their point of departure the study of phenomena formerly described by me under the name of the "Subconscious." These studies, already old, since I published them between the years 1886 and 1889, do not permit me to take part in this serious quarrel; they have a much more restricted and much less ambitious range. While the researches of the present day, whether they have a spiritualistic or a materialistic tendency, attain to the summit of the highest metaphysics, my old studies, very modest as they were, simply endeavored to throw light upon, describe and

classify certain phenomena of pathological psychology.

Disturbances of the notion of personality are freely met with in psychiatric studies. One finds not only disturbances in the conception which patients make of their own person, when they pretend to be a king or an animal, but also one very often meets with curious alterations in the assimilation, the incorporation of such and such a phenomenon with that feeling they have of their own person. Indeed, it is undeniable that there takes place in us a certain classing of psychologic phenomena; some are attached to the group of the phenomena of the outside world, others are grouped about the idea of our person. This idea, whether exact or not, which is probably in a great measure a product of our social education, becomes a center about which we range certain facts, while others are placed outside of ourselves. Without discussing the value and the nature of this distribution as it is brought about in the practically normal mind, I state simply the fact that certain patients attach badly to their personality certain phenomena, while others do not hesitate to consider the same facts as entirely per-

sonal.

In the delirium of typhoid fever one of my patients used to say to me: "Just think of my poor husband who has such a frightful headache; see how my children suffer in their stomachs, somebody is opening their abdomen." She attributed to other people the sensations of suffering which ordinarily we do not hesitate to attribute to ourselves. One meets much more often still with a somewhat different illusion in that large class of patients which I have described under the name of "psychasthenics;" many of them repeat incessantly such remarks as, "It is not I who feel, it is not I who eat, it is not I who speak, it is not I who suffer, it is not I who sleep; I am dead and it is not I who see clearly," etc.[1]

It is easy to determine that in these patients their movements are correct, their diverse sensations are correctly conserved, even their kinaesthetic and visceral sensations; but the subject nevertheless declares that he does not attach them to his personal-

[1]Nevroses et idees fixes, 1898, II, p. 62; Obsessions et psychasthenie, 1903, I, pp. 28 et 307, II, p. 40, 351.

ity; as far as he may he acts as if he did not have them at the disposition of his person. A patient of this sort, recently described by Séglas, declared that he had no memory and acted as far as possible as if he had really lost all memory, although it was easy to prove that he had in reality forgotten nothing.[2] The apparent trouble of memory just as the apparent antecedent trouble of sensation and movement was nothing more than a disturbance in the development of the idea and the feeling of the personality.

Among these psychasthenics the disturbance of the personality is not total. It is clearly manifest in certain mental operations which may aptly be called superior,—that is to say, in the judgment of recognition by which the attention attaches the new mental content to the old, in language with reflection and in voluntary action. But elementary operations of the personality seem to be preserved; consciousness, that act by which a multiplicity and diversity of states is attached to a unity, seems to survive. The subject declares that it is not he who remembers this

[2]Journal de psychologie normale et pathalogique, March, 1907, p. 97.

or that act, that it is not he who sees this or that tree, but he remembers it nevertheless and continues to see it. At least it is manifest to us that his mind continues to see the tree, since he describes the changes which takes place in it and tells us: "The tree is green, its leaves flutter, but it is not I who see it." The disturbance of the personal perception appears not to be profound.

This incomplete character of the disturbances of the personality is found in all the accidents of these psychasthenic patients; they have obsessions but are not completely insane and always recognize the absurdity of their obsessing ideas; they have impulses but do not carry them out; they have phobias concerning acts but never real inability to perform acts, or real paralyses; they have interminable doubts but no true amnesias. It is the striking trait of their character that they never have any symptom in its completeness, and this incomplete character of the disturbances of their personality falls within a general law.

Now there is another psychosis, all the symptoms of which might easily be put in a parallel column with those of psychasthenics,

and that is hysteria. This mental disease has for its essential characteristic exaggeration, the carrying to an extreme of all preceding symptoms. Instead of the preceding obsessions with doubt, there are in the mono-deistic somnambulism of hysterics fixed ideas which develop to the most extreme degree, with complete hallucinations and impulses; in place of doubt there is true amnesia; in place of phobias we meet with complete paralyses. It is, therefore, interesting to see the form which the trouble of the personality, just described as incomplete in the previously mentioned disease, will take in hysteria.

Doubtless certain hysterics at times express, with regard to certain sensations, judgments analogous to those of psychasthenics.

A patient formerly cited by Professor James used to say: "My arm is no longer a part of me, it is foreign to me, it is an old stump." This, however, is rather exceptional and most commonly one meets with a different order of facts. In the wake of certain crises in which fixed ideas have developed superabundantly and completely in the form of feelings, acts and hallucinations, which we have called mono-ideistic somnambulisms,

the patient acts as if he were completely ignorant of what has taken place; he does not doubt his memories, he does not declare them foreign to his person; he does not speak of them at all, he ignores them. The same subject has both legs paralyzed for certain periods of time, and yet he does not merely say that it is not he who walks, he does not walk at all. If one pricks or pinches his motionless legs, he does not merely say that the sensation is foreign to him, that it no longer belongs to him, that it is not he who feels; he says nothing at all, for he does not seem to feel it in any way. The loss which the personality suffers, the alienation of the phenomena seems to be more complete than in the preceding case. Shall we say, however, that the cases are in nowise comparable?

The psychasthenic still retained his memories, his voluntary acts, his sensations. It is true that he said, "It is not I who remember, I who move and feel," but he proved that he did feel by describing correctly objects placed before him.

In the hysteric these psychologic phenomena are merely suppressed, it is quite another disease, and that is exactly what I formerly

tried to show, although in opposition to the opinion current at that time. With a little more precaution than is necessary with the psychasthenic but in the same way, by more carefully avoiding attracting of the patient to the expression of these phenomena, one may demonstrate perfectly their existence in as complete a form as in the so-called normal individual. Take the case of a young girl of twenty years who in her somnambulistic periods indulges in *fugues* of several days' duration, far from the paternal roof. After her *fugues* she appears to have lost completely all memory of them, although she seems incapable of telling you why she went away or where she went. Under distraction and while she was thinking of something else, I put a pencil in her right hand and she wrote me the following letter apparently without cognizance of what she was doing.—"I left home because mamma accuses me of having a lover and it is not true. I cannot live with her any longer. I sold my jewels to pay my railroad fare. I took such and such a train," etc. In this letter she relates her entire *fugue* with precision although she continues to contend that she remembers nothing about

it. Another case, that of a man who seemed to have both legs paralyzed, rapidly traverses roofs during a somnambulism and even during the waking state makes with his limbs any movements one desires, if such movements are called for under favorable conditions. These people who seem not to see clearly or not to feel anything in their hands, describe to you in a subsequent somnambulism or by means of the writing of which I have just spoken, or by still other methods, all the details of objects placed before their eyes or brought in contact with their hands. Are we not obliged to conclude as in the preceding case, that sensations are really conserved, although the subject tells us that he does not feel them? These are interesting though perfectly commonplace clinical phenomena, since it is easy to see that all hysterical accidents are fashioned on the same model. They are analogous to the depersonalizations of psychasthenics, but they are not identical with them. I tried to sum them up under the word "subconscious," which, from my point of view, simply designates this new form of the disease of the personality.

Since the time when I first began to employ the word "subconscious," in this purely clinical and somewhat prosaic sense, I must admit that other authors have employed the same word in a sense infinitely more ambitious. The word has been used to designate marvelous activities which exist, so it appears, within ourselves without our even suspecting their existence, and which become the source of our virtues, of our enthusiasms and of the divination of genius. This recalls that amusing saying of Hartmann: "Let us not despair at having a mind so practical and so lowly, so unpoetical and so little spiritual; there is within the innermost sanctuary of each of us, a marvelous something of which we are unconscious, which dreams and prays while we labor to earn our daily bread." I intentionally avoid discussing theories so consoling and perhaps true withal; I simply remind myself that I have something quite different to do. The poor patients whom I studied had no genius; the phenomena which had become subconscious with them were very simple phenomena, such as among other men are a part of their personal consciousness and excite no wonder. They had lost

the power to will and the knowledge of self they had a disease of the personality, nothing more.

In connection with these same facts and in making use of the same word, their theories have touched the great problem of the connections between soul and body, between thought and brain. Are cerebral phenomena always accompanied by psychologic phenomena? When psychologic phenomena diminish, when they are reduced to their simplest expression do they not tend to disappear, and may not one then say that nervous phenomena subsist alone? May not certain coördinate movements which are but ill perceived by patients during their convulsions, and in choreas, be attributed to simple cerebral phenomena without interjecting the notion of psychologic phenomena? If we were really determined to baptize these physiologic phenomena without thought of the name subconscious, might we not on account of the analogy of the name say that all the phenomena of somnambulism or of automatic writing is easily explainable "by phosphorescent shadows which flit across certain centers of the cerebral cortex"!

Far be it from me to discuss these fine theories which seduce certain minds by their scientific appearance, and which after all do probably contain some truth. I am content to remark, that that is quite another problem Doubtless the question of the connections between thought and brain may be discussed with regard to somnambulism as well as with regard to nearly every fact of normal life, but in my opinion there is no good reason why this great problem should be particularly raised in this connection. The assimilation of the conduct of the somnambulist, of the execution of the suggestion, of a page of automatic writing, with incoördinate convulsive movements is pure childishness. These diverse acts are identical with those which we are accustomed to observe in persons like ourselves and to explain by the intervention of the intelligence. Undoubtedly one may say that a somnambulist is only a mechanical doll, but then we must say the same of every creature. These are useless reveries. In our ignorance, we simply know that certain complex facts, like an intelligent reply to a question, depend upon two things which we believe associated; superior cerebral mechan-

ism and a phenomenon which we call an effect of consciousness. We find the same characteristics in the so-called subconscious phenomena, and we must suppose back of them the same two conditions. To be able to affirm anything else we should need to possess precise knowledge concerning the expression of superior or inferior phenomena of cerebral activity, concerning the loss of the association of consciousness with cerebral phenomena, knowledge which we positively do not possess. Certainly it ought not to be with regard to half understood symptoms of a mental disease that we should try to resolve these great problems of metaphysics. In my opinion, we have got other psychologic and clinical problems to resolve concerning the subconscious without embarrassing ourselves with these speculations. You see that I am today more occupied than formerly with the relations which exist between the depersonalization of psychasthenics and the subconsciouness of hysterics. We must study the intermediate types which are met with much oftener than I had thought. It is necessary to determine if certain characteristics of the one disease are not found in the other. Does

not the hysteric herself possess a sort of insane belief which makes her relinquish certain phenomena? Up to what point is she sincere in her declarations of ignorance? Does she not to a certain extent deceive herself? By what steps does she arrive at the complete separation of phenomena which seem to exist in certain cases? Do the psychologic phenomena thus dissociated always retain their properties, are they not more or less transformed? The same problem presents itself in connection with the muscular phenomena, for in the hysterical contracture it does not seem to me exact to say that the muscular contraction remains absolutely what it was in normal movements. There are many other clinical problems of great importance which it seems to me must be studied None of these researches can be made without exact and long continued observations carried on under good conditions, and the very least of them is to my mind more important than all the huge tomes full of speculations put together. It seems to me not difficult to gather from these few reflections the reply to your questions, or, at least, to

certain of them.[1]

[1. What do you understand by the "Subconscious?"]

The word "subconscious" is the name given to the particular form which disease of the personality takes in hysteria.

[2. Does "doubling" (Janet) of consciousness ever occur whether normally or pathologically? If not, how would you explain the various so-called subconscious phenomena of abnormal psychology (automatic writing, speech, etc.)]?

This word is not a philosophical explanation; it is a simple clinical observation of a common character which these phenomena present.

[3. Does the subconscious always represent or depend upon the doubling of consciousness? If so, must there be a lack of awareness on the part of the personal con-

[1]A series of ten questions were sent to each contributor to this symposium, suggesting points on which it was thought desirable to obtain expressions of views and to keep the discussion within certain limits. Professor Janet concludes with answers to eight of these questions. I have interpolated each question in brackets in his article before the answer in order that the latter may be understood.—EDITOR.

sciousness for the second dissociated group of ideas?]

There exist all sorts of intermediate pathologic forms between the doubt of the psychasthenic and the subconsciousness of the hysteric.

[4. Is there normally in every individual a second group of co-acting ideas of which the individual is not aware (a so-called secondary consciousness)? If so, are such ideas discreet or systematized?]

It is possible, for all pathologic phenomena have their germ in normal physiology.

[5. If doubling occurs, is it always pathological? If so, how do you explain automatic writing, post-hypnotic phenomena, like unconscious solutions of arithmetical problems and similar phenomena in normal people?]

Clear-cut phenomena truly comparable to the subconsciousness of hysterics are infinitely rare in the normal mind. When they are really noted by competent observers they must be regarded as unhealthy accidents of a more or less transient character, and in general, as I have always observed, of a somewhat sinister omen.

Furthermore, these discussions of the

words, health and disease are absolutely puerile and recall the sophism of the Greeks about the bald-headed man. A phenomenon is morbid when it is most often associated with other symptoms of a well recognized disease and when it disappears with the disease. Such indeed is the characteristic feature of somnambulism and of automatic writing, which can no longer be evoked in hysterics when they recover from their disease.

[6. Do you include under the term subconscious all conscious experiences that have been forgotten, and which are capable of being synthesized with the personal consciousness at any given moment regardless of whether the forgotten experiences are co-acting or not (Sidis)? (In this case subconsciousness becomes co-extensive with the forgotten and out of mind.)]

It seems to me difficult to reply to this question when we know so little concerning the form in which our memories are preserved when they are not called forth.

[7. Do you limit the term solely to the conscious states which are in co-activity at any given moment, but of which the subject is not aware?]

The word "subconscious" seems to me rather to apply to this more clearly cut case.

[8. Do you base the conception of the subconscious on the fact of awareness on the part of the individual for certain conscious states, so that there would be different degrees of subconsciousness corresponding to different degrees of awareness? For example, as in absent-mindedness and as represented by the theory of the "fringe of the focus of consciousness."]

There are evidently relations between all these phenomena, but we must avoid confounding them with one another; analysis compels us to establish some discontinuity between the facts.

So here, my dear Dr. Prince, you have the answers requested. I fear that they will hardly satisfy your readers. An investigation of this sort does not resolve the problems once and for all; it merely brings the different opinions into competition as they were before. I hope that it may interest at least some few and lead them to psychological observations which will be of lasting utility to science.

CHAPTER FIVE

BY MORTON PRINCE

Professor of Neurology, Tufts College Medical School

IN the prefatory note to this symposium six different meanings in which the term "subconscious" is nowadays used were defined. All but the first and fourth of these meanings involve different interpretations of the same observed facts. In a symposium of this kind three of these only need to be considered; namely, those which Professor Münsterberg has so clearly distinguished and explained, as the points of view of the layman, the physician and the theoretical psychologist. As the first of these three hangs upon the validity of the second, we need only take up for discussion the two last. These two offer interpretations of facts which are not in dispute. Let me state over again the problem:

According to the first of these two interpretations (Professor Münsterberg's and my

second type), so-called automatic writing and speech, post-hypnotic phenomena like the solution of arithmetical problems and various abnormal phenomena, of the origin of all which the subject is ignorant, are the manifestations of dissociated ideas of which the subject is unaware and which are therefore called subconscious. Thus a "doubling" of consciousness results consisting of the personal self and the subconscious ideas. I prefer myself the term co-conscious to subconscious, partly to express the notion of co-activity of a second co-consciousness, partly to avoid the ambiguity of the conventional term due to its many meanings, and partly because such ideas are not necessarily *sub*-conscious at all; that is, there may be no lack of awareness of them. The co-conscious ideas may be very elementary and consist only of sensations and perceptions which have been split off from the personal consciousness, as in hysterical anesthesiae, or they may consist of recurring memories of past experiences. Under certain conditions by a process of synthesizing these ideas and assimilation of them with a greater or less amount of the personal self, which is thereby attenuated, in its facul-

ties, quite large dissociated systems of subconscious ideas may be formed and give rise to the complicated phenomena for which an interpretation is desired.

According to the opposing hypothesis, all these phenomena are explainable as the manifestations of pure physiological processes unaccompanied by ideas. The apparently intellectual and purposive acts as well as volition and memory are performed by brain processes alone to which no consciousness belongs. Such acts differ only in complexity from such other physiological processes which carry on the digestion and other functions of the body, on the one hand, and the spasmodic jerkings and twitchings, seen in chorea, epilepsy and other abnormal affections, on the other. "Unconscious cerebration, Carpenter called it years ago. Which of these two interpretations is correct? Professor Münsterberg is absolutely right in saying "no fact of abnormal experience can by itself prove that a psychological and not a physiological explanation is needed; it is a philosophical problem which must be settled by principle before the explanation of the special facts begins." The principle is the

existence of dissociated subconscious ideas. Are there such things?

With the meaning of this problem well before the mind it becomes manifest that before the fundamental principle of dissociated ideas is definitely established, it is the sheerest waste of time to discuss larger problems, such as the extent of the subconscious symptoms, whether they belong to the normal as well as the abnormal mind, whether they form a "self," a secondary self (third meaning), etc. These and others are important but secondary problems. Above all is it a wasteful expenditure of intellectual energy to indulge in metaphysical speculations regarding the existence and functions of a mystical subliminal self (Myers), transcending as it does all experience and everything that even a "subconscious self" can experience. The point then which we have to determine at the very beginning of the inquiry is this: Do ideas ever occur outside the synthesis of the personal self-consciousness under any conditions, whether of normal or abnormal life, so that the subject becomes unaware of these? Or, putting the question in the form in which it is prescribed to the experimenter: Do phe-

nomena which appear to be the manifestations of a subconscious intelligence necessitate the postulation of dissociated ideas, or are these phenomena compatible with the interpretation that they are due to pure physiological processes without psychical correlates?

I

The only grounds which I have for believing that my fellow beings have thoughts like myself are that their actions are like my own exhibit intelligence like my own, and when I ask them they tell me they have consciousness, which as described is like my own. Now, when I observe the so-called automatic actions, I find that they are of a similar character, and when I ask of whatever it is that performs these actions, Whether it is conscious or not? the written or spoken reply is, that it is and that consciously it feels, thinks and wills the actions, etc. The evidence being the same in the one case as in the other, the presumption is that the automatic intelligence is as conscious as the personal intelligence. The alternative interpretation is, not that a physiological process is lying, because lying connotes ideas, but that in some way it is able to rearrange itself and react to another person's ideas expressed through spoken language exactly in the same way that a conscious intelligence lies!

2

The phenomena which occur in the neatest and most precise form and which, from the fact that they can be induced, modified and examined at will, are best adapted for experimental study, are so called automatic writing and speech. We will therefore take these for examination and see if they ever require the interpretation of a secondary intelligence of a psychical nature.

When automatic writing is produced in its mostly highly developed form, the subject with absolutely unclouded mind, with all his senses about him is able to orient, think and reason as if nothing unusual is occurring. He may watch with unconcerned curiosity the vagaries of the writing pencil. In other words, he is in possession of his normal waking intelligence. Meanwhile his hand automatically produces perhaps long discourses of diverse content. But he is entirely unaware of what his hand is writing and his first knowledge of its content comes after reading the manuscript. We then have intelligence No. 1 and writing manifestations which may or may not be interpreted as having been produced by a

conscious intelligence No. 2. But writing of this sort is not always produced with intelligence No. 1 as alert as this.

On the contrary, often and perhaps most frequently the writer falls into a drowsy condition in which he imperfectly orients his surroundings, and if he is reading aloud according to the common method of conducting the experiment, he is only dimly conscious of what he is reading. This extinguishing of consciousness in intelligence No. 1 may go further and he may not hear when spoken to or feel when touched. He reads on mechanically and without consciousness of the matter he is reading. In other words, he has become deaf and tactually anesthetic and blind to everything but the printed characters on the page before him, and for even these mind-blind. In this state then there is practically extinguishment of all sense perceptions and intellectual thought, and finally the impairment of consciousness may be carried so far that he actually goes to sleep. Ask intelligence No. 2 what has become of No. 1, and the answer may be, "He has gone to sleep."[1]

[1]This answer was given by a subject observed while this paper was being prepared.

In other words, intelligence No. 1 has disappeared, but intelligence No. 2 continues.

Now to interpret the automatic writing produced when this great impairment of intelligence No. 1 has taken place as subconscious phenomena and due to subconscious intelligence whether physiological or psychological is to overlook the facts as presented. These are not phenomena of a subconscious intelligence but of an alternating intelligence or personality. The complete suppression of intelligence No. 1 has left but one intelligence, that which had been under other conditions intelligence No. 2. Unless the physiological interpretation be maintained the writing has ceased to be automatic in the sense in which the term was originally used and has become what, for the time being, is the primary intelligence although a different one from that which was originally awake. I say different because if we examine the content of the writing we may find it is made up of memories of past experiences which were entirely forgotten by the original intelligence No. 1 and gives evidence of a personality differing in character, volitions, sentiment,

moods and points of view, of a character differing in a large degree from that of the waking intelligence. The writing may be an original composition involving thought and reason comparable to that exhibited by a normal mind. Such compositions are of great interest from the light they throw upon the origin and development of secondary personalities, but with that we have nothing to do here. At present the only interest we have in such compositions is the evidence which they offer for the interpretation of such a personality. That is to say, whether its intelligence is the exhibition of physiological or psychological processes. To arrive at a satisfactory interpretation, we must study the behavior of the personality to its environment. If we speak to it, it answers intelligently in writing, though intelligence No. 1 fails to respond. If we prick the hand, we obtain a similar response and lack of response from intelligence No. 2 and No. 1 respectively, and the same with the other senses. It exhibits spontaneity of thought and its faculties are curtailed in the motor sphere alone in which it retains power only to

move the muscles of the arm and hand;[1] but even here in the motor sphere its faculties are not necessarily so limited for it may break out into speech and may exhibit various sporadic movements. It has lost only a general coördinating control over the whole body. In the motor sphere, therefore, its loss is not so great as that which has befallen intelligence No. 1. In fact, we have here a condition very similar to that of some persons in deep hypnosis. The main point is that now we have to do with an alternating intelligence, not a co-intelligence. Is it an alternating *consciousness?*

The next thing to note is that in passing from automatic writing, which is performed while intelligence No. 1 is completely alert, to writing which is performed while this intelligence is completely or nearly extinguished, we pass through insensible gradations from one condition to the other and *we must infer that the intelligence must be*

[1]By this is not meant that it has the same degree of knowledge and capacity for intellectual thought possessed by the original personality, No. 1, but only that it has all the different *kinds* of intelligence possessed by a normal person.

the same in kind, physiological or psychological, which produced the writing in the one case as in the other. If the alternating intelligence in the latter case is psychological, the subconscious intelligence in the former must be the same, for there is no place where we can stop and conclude—here the physiological ends and the psychological begins.

In the alternating intelligence producing automatic writing we have an alternating personality. We have here substantially the same condition that is observed, first, in some hpynotic states; second, trance states; third, "fugues," spontaneous somnambulism and post-epileptic states; fourth a state not very different from normal sleep with dreams, forgotten on waking; and fifth, certain states of deep abstraction. In none of these has there ever been raised the doubt as to the conscious character of the intelligence. All are "alternating" states and some are alternating personalities. In the first group, suggestions requiring conscious intelligence are comprehended, remembered and acted upon; in the second, writing and speech are manifested which can only be interpreted as the product of thought; in the third and fourth, the

thoughts and dreams can afterwards be regained by certain technical devices; and in the last the conscious processes are remembered.

3

Let us go further with our experiment and take a case exhibiting automatic writing where intelligence No. 1 remains unimpaired. We hypnotize such a subject. When asked what sort of intelligence it was that did the writing, he replies that he remembers perfectly the thoughts, sensations and the feelings which made up the consciousness of which intelligence No. 1 was not aware and that this consciousness did the writing. Still, it may be maintained that this in itself is not proof but that the hypothesis is permissible, that these memories are sort of hallucinations, and that in hypnosis what were previously physiological processes now have become reawakened and have given rise in the hypnotic synthesis to psychical memories. We shall then have to go further and seek for additional evidence.

4

Automatic writers may be divided into two classes; namely, those who at the moment of writing are entirely unaware of what the hand is writing; and those in whom at the moment of writing ideas corresponding to written words surge apparently from nowhere without logical associative relation into the mind. Mrs. H., for example, is an excellent automatic writer of the second class. At the moment when the pencil writes ideas which it is about to express arise at once in her consciousness so that she is herself in doubt as to whether she writes the sentence volitionally, or whether it is written automatically entirely independent of her will. Sometimes while writing, the ideas come so rapidly that unable to express them with sufficient celerity with the pencil she bursts out into voluble speech. To test her doubt, she is given a pencil and told not to write. Then she finds herself without control of her hand, and, in fact, the pencil writes the more fluently the greater the effort she makes to inhibit it. In the midst of a suitable sentence I hold her hand and restrain the writing, and

ask her to complete the sentence by word of mouth, which of course she could do if it was her own intelligence, that is No. 1, that was doing the writing; but she cannot complete the idea, showing that she does not really know what the hand was about to write.

Again, Mrs. B. in hypnosis is told to write automatically when awake, "three times six are eighteen; four times five are twenty." After being awakened she is given something to read aloud; while reading the hand begins to write as previously directed, but she stops reading saying, that she cannot because the, to her, absurd sums three times six are eighteen, four times five are twenty, keep coming into her head. She cannot understand why she should think of such things.

Now, are we to conclude that the mechanism of automatic writing in the second class of writers differs from that performed by the first class, and that when the writer is *aware* of the automatic thoughts the writing is done by psychical processes, and that when he is *not aware* of any automatic thoughts it is done by physiological processes? In every other respect, in content of writing and in behavior of the automatic personality to the

environment, we find the phenomena are the same. It does not seem to me that such an interpretation is justifiable. As I view this question of the subconscious, far too much weight is given to the point of awareness or not awareness of our conscious processes. As a matter of fact we find entirely identical phenomena, that is identical in every respect but one—that of awareness—in which sometimes we are aware of these conscious phenomena and sometimes not; but the one essential and fundamental quality in them is automaticity or independence of the personal consciousness. Doubling and independence of the personal consciousness are therefore the test of the subconscious rather than wareness.

5

In the content of automatic writing we find evidence which it is difficult to reconcile with a physiological interpretation. This was briefly touched upon before. When studied we find that the writing does not consist of words, phrases and paragraphs which might be mere repetitions or memories whether physiological or psychical, of previous experiences, but even consist of elaborate original compositions. Sometimes in Mrs. Verrall's writing they consisted of original Latin or Greek compositions.[1] Sometimes, as in those who are inclined to a spiritistic interpretation, of fanciful fairy-tale-like fabrications. Sometimes they exhibit mathematical reasoning shown by the solution of arithmetical problems. Sometimes they consist of ingeniously fabricated explanations in answer to questions. Sometimes they indicate a personal character with varying moods and temperaments. Feeling and emotion whether of anger, hatred or malice, kindness or amiability are often manifested. If such a docu-

[1]Proc. S. P. R., Vol. XX, p't liii, 1906.

ment were presented as testamentary evidence in the ordinary course of human affairs, it would seem as if the burden of proof would lie with him who would insist upon interpreting it as without psychological meaning and as only the expression of a physiological activity of the nervous system without thought.

6

Suggestions in hypnosis may result in post-hypnotic phenomena, which are manifestations of an intelligence which may be of a kind which cannot possibly be explained by physiological *habits,* as it exhibits logical readjustment of ideas of a high order; for instance, complex arithmetical calculations. The subject is only aware of the final result, being entirely ignorant of the process by which it was arrived at. Later this process can be recalled in hypnosis as conscious memories. To assume that such a calculation can be performed by a brain process not accompanied by thought would seem to require the abandonment of the doctrine of the correlation of mind and brain. In some instances, as with automatic writing, the subject becomes aware of the automatic conscious process though ignorant of its origin. Are we to assume here again that the processes giving rise to the same manifestations, under the same conditions, differ in kind according as whether a subject is aware of them or not—in the former case being psychical, in the latter physiological?

7

The great variety of phenomena occurring in abnormal conditions are often explained by the patient in hypnosis as the manifestations of ideas (perceptions, hallucinations, memories, emotions, etc.), which are remembered as such, though unknown to the personal consciousness. [This evidence does not differ in kind from that derived from automatic writing (3).]

8

After all, as I conceive the matter, the one great difficulty in the minds of those who are unable to accept the psychological interpretation of subconscious phenomena lies in understanding how we can have states of consciousness of which we are unaware. Consciousness is represented as a functioning unity, and it is difficult to accept the notion that all states of consciousness are not so synthesized as to form part of that great system which we dub self-conscious. Thus, consciousness is confused with *self*-consciousness. This has come about because the only immediate experience which anyone has of conscious states is with that which belongs to his self, which is only another way of saying with that of which he is aware. All conscious states, so far as we experience them, belong to, take part in, or help make up a self,—in fact, the expression, "We experience" implies a self that experiences. It is difficult, therefore, to conceive of a conscious state that is not a part of a self-conscious self. It seems queer then, to think of a state of consciousness, a sensation, a perception, an idea floating off—so to

speak—by its lonesome self and not attached to anything that can be called a self. It is difficult to conceive of anything worthy of being called a sensation or perception, excepting so far as there is a self to experience it; and yet it really is a näive conception to imagine that we are self-conscious of each and every conscious state that is aroused in correlation with out nervous system. Such a conception is very much akin to the näive notion of scientific materialism which assumes, for the practical purposes of experimentation or other reasons, that phenomenal matter really exists as such. Consciousness whether in an elementary or complex form must be correlated with an innumerable number of different physiological brain syntheses. If this is not so the whole structure of the psycho-physiology of the mind and brain falls. We have every reason to assume that some sort of a psychical state occurs when any one of these association-groups is excited to activity. (At any given moment the great mass of them is inhibited.) There is strong reason to believe that though ordinarily there is a harmony in the functioning of these association-groups, yet at times there is considerable disharmony

and there is clinical evidence for believing that there may be some independence of activity, especially under pathological conditions (hallucinations, obsessions, etc.), of different brain syntheses.

Without being obliged to determine what brain synthesis belongs to the personal consciousness at any given moment, we are entitled to ask why must we necessarily be aware of all the conscious states which may belong to each and every brain association-group? Is this not a näive assumption? If it is true that dissociated brain systems can functionate (as in other parts of the nervous system), and if it is true that they have psychical equivalents, then whether we are self-conscious of any given state of consciousness must depend, it would seem, upon whether the brain process, correlated with it, is synthesized in a particular way with the larger system of brain processes which is correlated at a given moment with the self-conscious personality. And in so far as a brain process can occur detached from the main system of brain processes, so far can consciousness occur without self-consciousness. Unfortunately, we have scarcely a glimmer of knowledge of the na-

ture of the synthesis, and therefore of the conditions which determine whether we shall be aware of any conscious state or not. This is a problem in psychology which awaits the future. Nor is self-consciousness a necessary element of consciousness. The näive character of the notion that we must be self-conscious of our consciousness is shown by introspective analysis in intense mental concentration or absent-mindedness. Here is no awareness of self, only a succession of ideas which adjust and readjust themselves. It is not until afterwards, on "returning to one's self," that these ideas through memory become a part of our self-conscious personality.

It will be noticed that an essential element in the conception of the subconscious, as generally held by students of abnormal phenomena, is the absence of awareness of the personal consciousness for the dissociated ideas. A consideration of the facts in their entirety do not permit of so limited a view to which I am compelled to dissent. Theoretically, a conception so narrow prevents our obtaining a broad view of allied psychological phenomena, obscures our perception of the broad principles underlying them and hinders

a correlation of closely related conditions. Dissociation, with activity, independent of the main focus of consciousness, does not necessarily imply or require absence of awareness on the part of the latter, and practically, as we have seen in discussing the phenomena of automatic writing, under the same conditions, a subject is sometimes aware of the dissociated ideas which are actively manifesting themselves and sometimes not. The same is true of post-hypnotic and abnormal phenomena. Indeed, even when there is absence of awareness on the part of the personal consciousness, the dissociated co-consciousness may, *per contra,* be aware of the content of the former. For this reason, if for no other, co-consciousness is the preferable term. The one fundamental principle and criterion of the subconscious is dissociation and co-activity (automatism). When we get rid of this notion of awareness as an essential element, we are able to grasp the relation between the subconsciousness of hysterics and the disaggregation of personality of the psychasthenic, a study with which Dr. Janet says he is now occupied. The obsessions, the impulsions, the fears, in short, the imperative

ideas of the psychasthenic are as much disaggregated from the personal consciousness as the same are in the hysteric, excepting for that amount of synthesis that gives awareness. Indeed, the hysteric may have a certain amount of awareness, or awareness for some and not for other ideas. The only difference then between an ordinary obsession and a "subconscious" obsession as commonly viewed, is that the subject is aware of the one and not of the other. Undoubtedly the condition of awareness alters considerably the resulting psychical content, as it brings into play various co-operative and modifying and in some measure adjusting ideas. This is not the place to enter into a consideration of the differences and likenesses between psychasthenia and hysteria, but I believe it important to insist that lack of awareness is not an essential fact or in the development of the subconscious, and furthermore that an appreciation of this fact will enable us to better correlate the different varieties of co-conscious activities not only in various diseased conditions but with facts of normal mental life.

9

Those who maintain the physiological interpretation seem to me to involve thmselves in difficulties far greater than any offered by the psychological interpretation. It is a fundamental interpretation of psycho-physiology that all thought is correlated with physiological activities. Whatever doctrine we adopt, whether that of parallelism or psychophysical identification, every psychical process is correlated with a physiological process and *vice versa*. We cannot conceive of a psychical activity without a corresponding physiological one. How then can we conceive of a physiological process of a complexity and character capable of exhibiting itself as a spontaneous volitional intelligence without corresponding correlated ideas? Surely this needs explanation quite as much as does a lack of awareness of conscious processes. Yet with a certain modification of our conception of the meaning of the physical, it is possible to reconcile both interpretations. As a panpsychist I find no difficulty in accepting both a physiological and a psychical interpretation. For those who accept panpsychism

there is no distinction to be made between conscious processes and brain processes of a certain order, excepting as a point of view. They become identified one with the other. The psychical is the *reality* of the physical. I cannot conceive of brain processes except as objective phenomena of conscious processes, and I cannot conceive of consciousness excepting as the reality or "inner life" of brain changes. So that we may indifferently describe automatic actions as manifestations of physiological activities, if we keep to one set of terms, or of psychical activities if we mix the terms. But in doing this let us not straddle and deceive ourselves as to our real position. In thinking in physiological terms we must not confuse ourselves and, by adopting a terminology, imagine that those physical brain factors are without psychical equivalents. To hold to a pure physiological explanation without the notion of anything psychical as a part of their real nature, is to postulate consciousness as a pure epi-phenomenon, something that we can shift in and out at our pleasure, when we have brain action, and juggle with as a conjurer juggles with his coins, —now you see them and now you don't.

It may be that the final explanation of many conscious processes, if we would avoid the entanglements of metaphysics, must be in physiological terms, because it must deal with that which belongs to experience. We can experience physiological "after effects," and by a simple inference go back to the physiological functioning forerunner, and thus perhaps explain memory, but, as Professor Münsterberg so well points out, it is difficult to see how a comprehensible explanation of memory can be found in "mental dispositions," and on grounds, as I would state them, that such dispositions being out of consciousness we have no experience of them and can have no conception of what they are. They become nothing more than meta-physical concepts. For myself I cannot even think of a "mental disposition," meaning, for instance, a name or mental picture that is not at the moment a state of consciousness, whether subconscious or belonging to my self-conscious synthesis. However this may be, I not only say with Professor Münsterberg that "the physiological cerebration is well able to produce the 'intellectual' result," but it *must* be able to do so. The only question

is whether it is accompanied by, belongs to, or *is* another aspect of ideas. This can, to my way of thinking, only be settled by logical inferences from the observed phenomena, and I have endeavored in what has gone before to marshal the evidence so far as it exists today in substantiation of this interpretation.

CHAPTER SIX

The Conception of the Subconscious

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THE conception of the subconscious has of recent years acquired a dominating position in psychiatry. The utility of this conception in the co-ordination of our knowledge, and its fruitfulness in suggesting new lines of research, have become so obvious, that the opposition which it at first aroused has been almost altogether overcome. Considerable disagreement, however, still exists as to the precise meaning to be ascribed to the term. What is the nature of a subconscious process—is it a physical or

"No fact of abnormal experience can by itself prove that psychological and not a physiological explanation is needed; it is a philosophical problem which must be settled by principle before the explanation of the special facts begins."—MUNSTERBERG.

mental phenomenon? This and other similar questions constitute a fertile source of dispute, and the Symposium which recently appeared in this JOURNAL showed the very divergent views held by some of the Leading psychologists and psychiatrists of the day.

The present paper is an attempt to investigate the essential nature of this conception, to determine its claims to a place in the structure of modern science, and the position which must be assigned to it within that structure.

It will be profitable to first consider the more important stages in the historical development of the theory of the subconscious. Our next step will be an enquiry concerning the characters which modern science demands that a conception shall possess in order to qualify it for admission within its portals. We shall then be in a position to consider how far the conception of the subconscious satisfies these demands, and to determine its place and function in psychology.

The history of all thought has been dominated throughout by an essential tendency of the human mind—the endeavor to obtain continuity. The mind abhors discontinuity as

nature is said to abhor a vacuum. It strives to bring every new experience into line with the old, to do away with inexplicable gaps, and to reduce its world to a connected intelligible whole. Mythology, religion, and philosophical systems provide us with numerous examples of this constant endeavor. Science is nothing but the same trend of thought become coherent and articulate.

Now it was early seen in the history of philosophy that, among the contrasts to be observed between the physical and mental, one of the most prominent was the comparative discontinuity of the latter. The psychical life made its appearance in an irregular manner, in flashes of limited duration, and in the intervals between these flashes it appeared to altogether cease to exist. In contrast to this the material world seemed relatively continuous, permanent, and independent of the individual. Hence, if the study of the mind was to be brought into line with the rest of our knowledge, an attempt had to be made to get rid of the apparent discontinuity and irregularity of psychical experience. Such an attempt has formed an integral part of most philosophical systems. The method

adopted by the earlier philosophers, however, consisted mostly in imaginative and fantastic constructions, which aimed solely at internal coherence, and which had but little relation to the facts. It was only after the method of the inductive sciences had long demonstrated its utility in other branches of knowledge, that an endeavor was made to apply it to the sphere of psychology.

The first serious contribution to the filling up of the gaps in the psychical series was made by Leibnitz, who demonstrated that our conscious life contains small elements lying outside its main stream, but which nevertheless produce an effect by a process of summation and combination. Schopenhauer (1) thought that a large number of our sense perceptions were the result of unconscious processes of reasoning—and the same theory was propounded in a more exact form by Helmholtz (2). By this period, therefore, the attempt to bridge the intervals in the psychical series by processes of unconscious thought had taken definite shape.

The question of the subconscious first, however, became prominent with the publication of Hartmann's "Philosophie des Unbewus-

sten," in 1868. The intense enthusiasm with which this work was greeted in the most varied quarters affords a striking demonstration of that hunger for continuity whose existence we have already noted. Hartmann conceived the subconscious as a second personality concealed beneath the surface of our ordinary consciousness, but precisely comparable to the latter in its structure and functions. He appeals to this hypothetical being whenever there is a gap in the chain of visible causation, and endows it with properties of a really startling kind. "Let us not despair," he says, "at having a mind so practical and so lowly, so unpoetical and so little spiritual; there is within the innermost sanctuary of each of us a marvellous something of which we are unconscious, which dreams and prays while we labor to earn our daily bread" (3). Hartmann's work is of historical importance on account of the stimulus it provided to further investigation, but his use of the concept of the unconscious was so unbridled that the value of his actual results is almost altogether nullified. James has described his theory as a "tumbling ground for whimsies," and Höffding remarks, "We may say of it,

as Galileo said of the appeal to an almighty will, it explains nothing because it explains everything" (4).

Some of the most important advances in the historical development of the subconscious have been furnished by the French School of Morbid Psychology during the latter part of the nineteenth century, initiated under Charcot and Ribot, and culminating in the work of Janet. In his classical "Automatisme Psychologique" the latter demonstrated that a large number of morbid phenomena can be adequately explained by assuming the existence of dissociated mental elements altogether outside the sphere of the personality.

Morton Prince has further developed Janet's point of view. He divides psychological material into that of which the individual is personally conscious and that of which he is not personally conscious. Those experiences are personally conscious which are synthesized in the "personality." The experiences of which the individual is not personally conscious are further divided into co-conscious and unconscious. Co-conscious corresponds in the main to Janet's "subconscious"

—actively functioning ideas dissociated from the personality. Under *unconscious* are included the phenomena of memory, and in general all the ideas, traces, etc., which are not at the moment actively functioning, and which are to be regarded as mere physiological residua. Any of these latter may at any time become conscious or co-conscious. Dr. Prince considers that the essential character of a co-conscious idea consists in the fact that it leads an autonomous existence, and is not dependent upon the ego-complex. Co-conscious, therefore, does not necessarily imply that the ego is unaware of the idea in questoin. Thus, in the well-known case described in "The Dissociation of a Personality," one personality knows all the thoughts and actions of a second, but considers them to be those of another being whom, indeed, she regards with unconcealed dislike. This extension of the meaning of Janet's conception is very important, and enables us to throw more light upon the analogous manifestations occurring in paranoia.

The most modern development of the doctrine of the subconscious is to be found in the works of Freud, Jung, and the Zürich School.

Their conception is totally different from those enumerated above, far more different than is generally supposed. This point will be better appreciated after a consideration of certain philosophical questions, which will subsequently be discussed.

We have seen that the concept of the subconscious mind has gradually developed as a result of the demand for continuity in the psychical series. This same demand for continuity has, however, led to an endeavor to solve the difficulty in an altogether different manner. Certain philosophers asserted that the psychical was unreal, a mere epiphenomenal product of the physical, and that nothing but the material existed. The brain was considered to secrete thought as the liver secretes bile. This school reached its zenith in the materialism of Moleschott and Büchner —a crude and näive philosophy now generally discredited. Later authorities, however, while admitting the reality of the psychical, denied that it could be made amenable to the method of science. Thus Karl Lange required that all psychological definitions should be replaced by physiological, and Münsterberg asserted that "mental facts, as

they are not quantitative, cannot enter into any causal relation" (5). It will be seen, therefore, that these authorities consider that so long as we are dealing with psychical facts there can be no question of causation or of science. They must be first translated into physiological terms, and it will then be possible to formulate laws concerning them, and thus to incorporate them into the structure of our knowledge. This school has been aptly described by Höffding as virtually wishing to abolish psychology in order to convert it into a science. For the exponents of this theory the question of the subconscious does not exist—consciousness and subconsciousness are alike to be reduced to physiological terms, and the difference between them consists merely in a varying mode of combination of the cerebral elements.

Certain other authorities adopt a compromise—they are ready to consider consciousness psychologically, but the subconscious is for them nothing but an inappropriate name for brain processes which have no psychological accompaniment.

The main question at issue between these various schools is, therefore, whether the

subconscious is to be regarded as a brain fact or as a mind fact, whether it is a subject for physiology or for psychology. The present paper endeavors to show that this question is in itself based upon a misconception and that its solution becomes at once obvious when the meaning of the terms is correctly apprehended.

As a preliminary measure it will be necessary to temporarily diverge from our main subject, and to shortly consider the general properties of scientific concepts.

The philosophical consideration of the groundwork of science is a growth of comparatively recent years. The earlier scientists contented themselves with practical results, and did not consider the foundations upon which they were building. During the latter part of the nineteenth century, however, the need for a precise formulation and definition of these foundations began to make itself felt. Hence there arose a school of critical philosophy unique amongst philosophical creeds in the fact that its exponents have been men eminent in the scientific world —Clark-Maxwell, Ostwald, Mach, Karl Pearson. Pearson's "Grammar of Science"

remains the finest vindication in the English language of the principles, aims, and methods of modern science. The short exposition which follows is an endeavor to cull the essential points from its pages. But limitations of space prevent more than a short summary of the principal conclusions being given, and for the demonstration of their validity the reader must be referred to the original work.

Science is characterized, not by its content but by its method of investigation—it embraces the whole field of knowledge and is as applicable to history as it is to chemistry. It deals, not with a fabulous entity called "matter," but with the content of the human mind, and acknowledges its incapacity to deal with anything which forms no part of that content. The material of science is therefore human experience, what James calls "the flux of sensible reality." In other words, phenomena, of whatever sort or kind they may happen to be, constitute the material, while science is simply our method of treating this material. Now it is found that human experience does not take place in an entirely haphazard and chaotic manner, but that the events follow one another with more or less

regularity and order. This is the principle of the uniformity of nature. The aim of science is to find a means of proceeding from one point of experience to another with the least exertion of mental energy, in other words to achieve an "economy of thought." Its method is, firstly, to take some portion of human experience and to classify the facts found therein into sequences; secondly, to find some simple treatment which will resume an indefinite number of sequences in a single formula. Such a formula constitutes a scientific law. The law is the more fundamental the wider the range of facts which it resumes. It is not a mythological entity, it is merely a construction of the human mind to enable it to deal better with its experience. If we examine any scientific law in order to determine its essential nature, we find that it has no immediate reference to sense impressions, or, in other words, to phenomenal reality, but is purely ideational or conceptual in character. The meaning of this statement will be made clearer by taking an example, e. g., Newton's law that "every particle attracts every other particle." Now a particle is not a sense-impression; it is defined as an infinite-

ly small portion of matter, that is to say, a pure idea, formed by carrying what is given in sense impressions to a conceptual limit in the mind. "Newton is here dealing with conceptual notions, for he never saw, nor has any physicist since his time ever seen, individual particles, or been able to examine how the motion of two such particles is related to their position" (6). Similarly geometry, with its points, straight lines, and surfaces, is dealing with entities which are frankly acknowledged to be conceptual in character, and to have no real existence in the world of sense impressions. The physical conceptions of the atom and the ether are precisely analogous in their nature. We find, therefore, that science does not profess to mirror some hypothetical universe lying altogether outside the human mind, but simply to provide a conceptual model, a "conceptual shorthand," by aid of which we can resume our sense impressions and predict future occurrences. "The physicist forms a conceptual model of the universe by aid of corpuscles. These corpuscles are only symbols for the component parts of perceptual bodies, and are not to be considered as resembling definite per-

ceptual equivalents. We conceive them to move in the manner which enables us most accurately to describe the sequences of our sense impressions. This manner of motion is summed up in the so-called law of motion" (7). We therefore reach the conclusion that science is simply a mode of conceiving things. The justification of science lies precisely in the fact that it does enable us to resume our sense impressions and predict future occurrences; its value as truth lies in its value as a working hypothesis by which we may become the masters of phenomena.

Now there may be more than one mode of conceiving the same things, and which mode we adopt may depend on the practical necessities of the moment. Thus the mathematician insists on regarding bodies as bounded by continuous surfaces, whereas the physicist is compelled to regard them as bounded by discontinuous atoms. Neither of these modes is more true than the other; the question is merely which one has the greatest practical value in the particular sphere of thought in question.

Armed with these conceptions let us now direct our attention to those fields which

more particularly concern us, and firstly let us consider the problem of the physical and the mental. What, in fact, is the difference between physics and psychology? We are usually told that there are two orders of phenomena, the physical and the mental, two series which are so qualitatively different that the passage from one to the other is unthinkable. Concerning the relation between these two series innumerable philosophical battles have been waged, and science must approach the question with a due regard for the metaphysical quicksands which await her on every side. It was pointed out by Bishop Berkeley that sense impressions are the only things of which we have any immediate knowledge, and modern science, having with some difficulty duly digested this fact, has discarded the pretence that it is engaged in a research into "things in themselves," and has relegated the latter to the limbo of useless figments. Being entirely pragmatic in its ideals, and having a criterion of validity measured solely by utility, it recognizes that its field is the content of the human mind, neither more nor less. The modern scientist cannot therefore be accused of sharing the vulgar conception

that "reality" consists of "material substance," which by means of "energy and force" acts on "spiritual substance," giving rise in the latter to "sensations" which mirror the external reality. What, then, does he mean when he distinguishes between the mental and the material? The answer is that he means two different modes of conceiving human experience. On the phenomenal plane the physicist and the psychologist are dealing with precisely the same entities, sense impressions; the distinction between them lies in their different conceptual methods of resuming these sense impressions so as to express them in simple formulæ. The physicist resumes his sense impressions by means of a conceptual model involving space and time, whereas the psychologist regards them as actual or potential constituents of a consciousness. As Mach (8) puts it, there is a "change of direction" in their methods of research. The ultimate goal of the physicist is a complete description of the universe in terms of motion or mechanism, the ultimate goal of the psychologist is "personality." Neither method is in itself better, more perfect, or more real than the other, both have an equal

right to be incorporated into the structure of science, comparison between them can only be made on the grounds of utility. We are only entitled to ask by which method we are better enabled to resume our experience of the past and to predict our experience of the future. And the only answer to this question which it is possible to give in the present state of knowledge is that both methods are of value, and that neither can be abandoned in favor of the other.

For the present the physiologist and the psychologist must be allowed to proceed along their respective roads. But there must be no jumping from one mode of conception to the other. The physiologist must not introduce a psychological conception into his chain of cause and effect, nor must the psychologist fill up the gaps in his reasoning with cells and nerve currents. The former error is comparatively rarely met with, the latter is unfortunately only too common. No physiologist would consent to admit "ideas" as active elements in the sequence of changes which take place in the nervous system. He simply points out that he has no use for such a conception, and that, so far from helping

him in his explanation of phenomena, it vitiates his reasoning, and destroys the validity of all his former concepts. The psychologist, on the other hand, is a weaker vessel; he less commonly belongs to what James has termed the "tough-minded" school of philosophy. He is usually prepared to humbly admit that the phenomena of memory are adequately explained by the potential physical energy of a brain cell, and does not venture to suggest that the potential psychical energy of an idea is a conception just as valid, and with precisely the same claim or lack of claim to real existence.*

The distinction between the phenomenal and conceptual which underlies the principles

*This exposition of the method of science is mainly extracted from a paper by the author, entitled "A Philosophy of Psychiatry" (*Journal of Mental Science,* July, 1908), which contains a more detailed investigation of the scientific basis of Psychiatry. The term "sense-impression" has been used for the sake of simplicity. It can no longer be maintained, however, that the mind contains nothing but sensory elements. Thought and emotion involve factors which cannot be reduced to terms of sensation, in the proper meaning of that word. To be strictly accurate, "element of experience" should be substituted for "sense-impression" in the above description.

given above, is of fundamental importance. Anything which can be experienced is a phenomenal fact—a scientific concept is a construction of the mind which cannot be experienced at all. A nerve fibre is a phenomenal fact, the nerve current which traverses it is a conception. The nerve current is not a portion of our experience, we only experience the results which we ascribe to it; in other words, we invent the nerve current to explain the phenomenal result. Similarly colors, chemical substances, falling bodies are phenomena; ether waves, atoms, the force of gravity are conceptions. Precisely the same distinction is met with in the scientific treatment of the psychological series, a fact which we shall hope to subsequently demonstrate.

It is only within recent years that morbid psychology has become amenable to the method of science. It was necessary that objectives should replace introspective psychology, and that the presence of certain external signs should be regarded as indicating the presence of certain conscious processes, a deduction from analogy which every man makes when he talks to any other man. Without this assumption any scientific treatment

of the mental processes of the insane was obviously impossible. It is needless to point out that psychology must also posulate the existence of an absolute determinism within the psychical series. The law of causation forms the essential basis of the method of science.

Our conception of the nature of science, and its relation to psychology, may therefore be summarized as follows:

(1) The psychical and the physical are two different modes of conceiving human experience.

(2) From the point of view of science we are compelled to postulate an absolute determinism within each of these modes.

(3) The method of science is applicable to either mode. It consists in the more or less arbitrary division of phenomenal experience into artificial elements, and the construction of laws regulating the interaction of these elements. The sole justification of these laws consists in the fact that they enable us to resume and predict our experience, and hence to achieve an "economy of thought."

(4) Science does not claim that the ele-

ments with which it deals necessarily have perceptual equivalents, and it may ascribe properties to certain of these elements which are even contradictory to all perceptual experience, e. g., a weightless and frictionless ether. The constructions of science are therefore largely conceptual in character, and must be sharply distinguished from the phenomena which constitute our actual experience.

(5) The various elements entering into a conceptual construction must all be of the same mode, they may be either physical or psychical, but cannot consist in a mixture of the two.

We are now in a position to return to our main theme, and to consider in the light of first principles the various doctrines of the subconscious so far enunciated.

It is at once obvious that we must fundamentally disagree with those authorities who regard the subconscious as a brain fact and not as a mind fact. Such a view involves that jumping from one mode of conception to the other, from the psychological to the physiological which we have seen to be incompatible with the method of science. A con-

ception must be in the same terms as the phenomena which it is designed to connect. We cannot conceive cells and fibres as the connection between two ideas. The conceptions of psychology must all be constructed within the psychical series. Only in this way can psychology have the same air as its sister sciences, the construction of a conceptual model which will enable us to resume our past and to predict our future experience. The conception of the subconscious has been devised by the psychologist to explain certain psychological phenomena—it must be regarded as a psychological conception.

For the same reasons *memory* must also be regarded as a psychological conception, a conception constructed to fill up the gaps in the phenomenal psychic series. It is, of course, true that memory is not itself a phenomenal psychic fact, we only experience the recurrence of a certain mental process—we assume, in order to satisfy our demand for continuity, that it has in some way existed during the interval, and we invent the conception of memory to explain this continued existence. To the reader who has not adequately grasped the essential principles of

the modern philosophy of science this may appear to be a very unsatisfactory explanation of memory. He may object that if this is all that psychology can say in the matter he would prefer to adopt the physiological point of view, and to regard memory as the conservation of traces in the brain. But he will find that the physiological conception of memory is no more a phenomenal fact than the psychological. He will find himself using such terms as "nervous energy," "permeability of paths," and other purely conceptual ideas, and he will finally begin to realize that his "conserved trace" is merely a conception invented to resume the fact that a certain brain phenomenon is capable of repeating itself. Translating memory into the physical series does not make it a phenomenal fact, it must inevitably remain a conception. And if memory from both points of view is merely a conception, then surely if we are talking of the recurrence of mental phenomena it is a psychological conception. Both in this case and in that of the subconscious no useful purpose is served by suddenly jumping into the other series, and all hope of discovering a comprehensive scien-

tific law is *ipso facto* abolished. To maintain that the subconscious is a brain fact and not a mind fact is precisely analogous to maintaining that the law of gravity is a psychological conception and not a physical conception.*

*Münsterberg (see Chapter One) has objected that "Those who insist that the memory idea presupposes a lasting mental disposition and cannot be explained by physiological after-effect, only forget that the same logic would demand a special mental disposition also for each new perception. The whole mystery of an idea entering into consciousness presents itself perfectly every time when we use ous eyes or ears." We cannot admit that this is altogether true—the logical extension of the doctrines enunciated above would be simply that every new sensation *might* be also due to a previous "mental disposition." But science demands of its conceptions that they should satisfy the criterion of utility. We construct a conceptual memory and a conceptual subconscious in order to explain our experience—the conception of a previous mental disposition for each new sensation would serve no useful purpose whatever. We have to admit that sensations appear in a mind without any antecedents in that mind, and there can be no scientific objection to such an admission. Such an objection could only have force if we postulated a law of conservation of psychic energy for each individual consciousness analogous to that holding in the material world. If we adopt panpsychism we may assert the existence of psychic antecedents to every sensation, but these would not, of course, exist

The example of memory shows us that psychology, like its sister sciences, has its phenomena and conceptions. This is only a reiteration of the fact that sciences do not differ in their method, but only in their material. For the sake of simplicity we have so far spoken of the subconscious as if it were also conceptual in character, but this position now requires considerable qualification.

It is of fundamental importance to recognize the fact that different authors when they speak of the subconscious not only speak from different points of view, but speak of totally different things. Morton Prince has pointed out that "the term subconscious is commonly used in the loosest and most reprehensible way to define facts of a different order, interpretations of facts, and philosophical theories" (9). Hence it is meaningless to predicate any statement of the subconscious as a whole without first defining the

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in the *individual* consciousness. In the present state of our knowledge such a speculation takes us beyond the limits of utility, and therefore of science. Panpsychism may, however, be regarded as the Utopia of the psychologist.

sense in which we are employing the term. Dr. Prince has enunciated its various meanings in his prefatory note. By Stout and others the term is used to denote those marginal portions of the field of consciousness which are not at the moment in the focus of attention. Here subconscious merely means "dimly conscious." Myers ascribes to the subconscious various supernatural properties which take his conception altogether beyond the limits of science. We have already dealt with Hartmann's picture of the subconscious as a second self comparable in all respects to the personal consciousness. The remaining meanings are best illustrated by the doctrines of Janet and Freud, and we must now proceed to examine these at some length.

We have actual experience only of our own conscious phenomena—we deduce the conscious phenomena of others by means of analogy in two ways, directly from what they tell us through the medium of speech, indirectly from their actions.* Now the subconscious

*It may be maintained that our knowledge of the conscious phenomena of others is therefore really conceptual in character, as we ourselves have no actual

of Janet and his followers does not differ in its essential nature from any "conscious phenomena of others" with which we are acquainted—its existence is deduced on precisely the same grounds. This fact has been ably demonstrated by Dr. Prince in his contribution to the symposium. If we hold a conversation with a patient whose hand at the same moment writes of matters which are unknown to the personality, we speak of the subconscious phenomena attending the writing for the very same reason that we speak of the conscious phenomena attending the patient's conversation. The distinction of the subconscious lies solely in the fact that it is dissociated from certain other "conscious phenomena of others," which we designate as the personality. The subconscious of Janet is, therefore, a phenomenal fact. It may

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experience of them. If conceptual is taken in an indefinitely wide sense this is of course true. But such deductions are on an altogether different plane from the conceptions of science. Relatively to the conceptions of science they are phenomena, just as helium in the sun is a phenomenon—and both science and everyday life are compelled to treat them as such. To refuse to subscribe to this point of view would involve the adoption of Solipsism.

be reduced in complexity to even a single idea, but it remains a phenomenon. Janet himself has remarked, "These diverse acts are identical with those which we are accustomed to observe in persons like ourselves and to explain by the intervention of intelligence. Undoubtedly one may say that a somnambulist is only a mechanical doll, but then we must say the same of every creature. The term 'doubling-of-consciousness' is not a philosophical explanation; it is a simple clinical observation of a common character which these phenomena present." (10)

If, however, we now turn to the views of Freud and Jung, we meet again with the phenomenon of dissociation, but we find added thereto a mass of conceptions of an altogether different character. Limitations of space prohibit any adequate description of these doctrines, and we must therefore assume that our readers are already acquainted with their main features. We are here only concerned with the general conceptions underlying Freud's teaching, and these may, perhaps, be described in our own terminology as follows: The subconscious (*unbewusstsein*) is regarded as a sea of unconscious

ideas and emotions, upon whose surface plays the phenomenal consciousness of which we are personally aware. These unconscious ideas are agglomerated into groups with accompanying affects, the systems thus formed being termed "complexes." These complexes are regarded as possessing both potential and kinetic energy, and thus are capable of influencing the flow of phenomenal consciousness according to certain definite laws. The nature of their influence is dependent upon the relation they have to each other and to the normally dominating or ego complex. The complex may either cause the direct introduction into consciousness of its constituent ideas and affect, or its influence may be distorted and indirect. The indirect effects may be of the most various types—symbolisms, word forgetting, disturbance of the association processes, etc. A single idea or image in consciousness may be conditioned (constellated) by a multiplicity of unconscious complexes.

All this is surely very different from anything that we have hitherto considered. In what does this difference consist? What is an "unconscious idea"—is not this a mean-

ingless self-contradiction? Has anybody ever experienced an "unconscious complex"? The answer to all these questions is simple—we are no longer on the phenomenal plane, we have ascended to the conceptual. Unconscious ideas and complexes are not phenomenal facts, they are concepts, constructions devised to explain certain phenomena—they have not been found, they have been made. The implicit assumptions in Freud's doctrines may be expressed as follows: If we imagine certain entities which may be described as unconscious ideas and complexes, if we ascribe certain properties to these entities, and assume them to act according to certain laws—then we shall find that the results thus deduced will coincide with the phenomena which occur in actual human experience. This train of thought is the analogue of that underlying all the great conceptual constructions of physical science—the atomic theory the wave theory of light, the law of gravity, and the modern theory of mendelian heredity.

We thus owe to Freud the first consistent attempt to construct a conceptual psychology. The attempt is, moreover, a legitimate em-

ployment of the method of science, the construction of a conceptual model which will enable us to resume our experience. It is, of course, true that conceptions have to be employed therein which cannot even be conceived as having a phenomenal existence. But we have seen that the same statement is equally true of the conceptions of physics. An unconscious idea is a phenomenal impossibility just as a weightless, frictionless ether is a physical phenomenal impossibility. It is no more and no less unthinkable than the mathematical conception $\sqrt{-1}$. But objections of this kind do not in the least vitiate the use of phenomenal impossibilities as scientific concepts; the utility of such conceptions in physical science will surely suffice to demonstrate this. It is only necessary to clearly understand that we are speaking of concepts and not of phenomena.

Similarly when we speak of "complexes" we mean that it is convenient to conceive that ideas are bound together into systems, that these systems persist in the mind, although we are not conscious of them, and that they exert an influence upon the flow of phenomenal consciousness of which we may or may

not be aware. The complex may be said to be the psychological analogue of the conception of force in physics. Strictly speaking, it can never itself become a fact of experience, a portion of phenomenal consciousness. Certain ideas, affects, and conative tendencies belonging to the complex may become facts of experience, we may be aware that we possess the complex—but the complex as a whole and as a directing force can never be actually experienced, it is a pure conception. This may be seen, for example, in what may be termed the "political complex." When the party politician is called upon to consider a new measure, his verdict is largely determined by certain constant systems of ideas and trends of thought which we refer to as his "political complex." He may be honestly convinced that he is influenced solely by an unbiased consideration of the pros and cons of the measure in question, but the psychologist knows that this is not really so. Even if the politician is aware that he is biassed, this complicated system we have described can hardly be present as a whole to his mind. The "political complex" is not conscious, and it is equally impossible that it can be co-

conscious. It is merely a conception which enables us to explain the fact that when a certain man is confronted with a political situation he will tend to act in a certain constant direction.

We cannot agree with Dr. Prince when he says, "What is it that binds the mental experience of an emotional railroad accident, an obsession, or of a subject or mood complex, or whatever kind of association it be into a system? The answer must be sought in the nervous system, not in the mind" (11). We should prefer to say that it must be sought in the conceptual sphere, not in the phenomenal.

The conception of the complex is not, except in name, an altogether new departure in psychology. James's description of the various "selfs" (12) which determine a man's action can be immediately translated into the language of complexes. Similarly Hoffding, when discussing the theories of the Associationists, has pointed out that "in the process of association it is the connected whole which exercises its powers over the single ideas" (13).

The lack of a perceptual equivalent to

many of Freud's conceptions is very striking when we peruse such a work as the "Traumdeutung." Here the individual dream image is conceived as being constellated by a large number of unconscious complexes—as a result of the combination and interaction of these complexes the single image emerges into consciousness. Can we form any idea of a state of mind in which all this mass of mental elements is actually and phenomenally present? We have no evidence whatever of their phenomenal existence, such evidence as we had, for example, in the case of automatic writing previously considered. Freud has himself remarked on this point, "How can one picture to oneself the psychical condition during sleep? Do all the dream thoughts (subsequently elicited by analysis) actually exist together, or after one another, or do they constitute different contemporaneous streams finally coalescing? In my opinion, there is no necessity for us to attempt the construction of a picture of the psychic state during dream formation. We must not forget that we are speaking of unconscious thinking, and this may quite possibly proceed altogether differently from the conscious think-

ing with which we are acquainted" (14). Similar considerations apply to Freud's description of the mechanism of word-forgetting, mistakes in speaking, etc.

It is this very aspect of Freud's teaching which has aroused so much opposition, because the introduction of conceptual psychology has seemed so strange to those who have been accustomed to leave psychology its phenomena, but to hand over its concepts to physiology.

All these difficulties vanish at once when we remember that we are speaking of concepts and not of phenomena. We are no more called upon to picture what a mass of simultaneous unconscious ideas may be like, than a physicist is called upon to picture what an ether without weight and without friction may be like. It is of the utmost importance that the phenomenal and conceptual should be sharply distinguished when dealing with these questions. The neglect of this principle has, we believe, led to that confusion of terminology and treatment stigmatized by Dr. Prince in his communication upon the Subconscious at the recent Geneva Congress. It is best to limit the term subconscious to the

phenomenal facts demonstrated by Janet, and to speak of Freud's conception as the "unconscious," the literal translation of the German *Unbewusstsein*.

Scott (15) has objected that Freud's doctrine has revived an atomistic theory of psychology—but all sciences are compelled to more or less arbitrarily divide phenomenal continua into artificial elements. They demand, in fact, a "continuity of conception together with a conceived discontinuity of the material." The conceptual theory of the unconscious is, moreover, constructed on an altogether different plane to the philosophical system of the old Associationists, in which the elements were regarded as real, and the unity of the whole as unreal.

It must be definitely understood that we are making no attempt to demonstrate the validity of Freud's conceptions. Such an aim lies entirely outside the scope of the present paper. Our sole concern is to show that his conceptions are cast within the legitimate framework of science, and that they have all the properties which science demands that a concept shall have. But if this be so, then the validity of Freud's theories must be test-

ed by the method which has established all the conceptions of science, the method of experiment and verification. They cannot be proved or disproved by *a priori* considerations. The conceptions must be applied, and the results thus deduced must be compared with the results which are actually found. The truth of a scientific conception is neither more nor less than its utility in enabling us to resume and predict our experience.

We must now proceed further and endeavor to determine the relation between Janet's *subconscious* and Freud's *unconscious*. This relation is often held to be one of rivalry, but if our analysis of the two doctrines is correct, this view must be erroneous. There can be no rivalry between a description of the phenomenal facts, and a conceptual model constructed to resume these facts. The phenomenon of dissociation has not been disputed by Freud—on the contrary, it takes a prominent place amongst the circumstances which he desires to explain. His work lies on a deeper plane, his aim is not a description of the facts, but the conceptual explanation of these facts. We have here, in fact, that progression by which the method of science is invari-

ably characterized. Firstly, the collection and classification of facts, represented here by the co-ordinated description of the phenomena of the subconscious or co-conscious; secondly, the construction of a conceptual model to explain these facts, represented by the theories of Freud. Precisely analogous advances are to be found in the history of physics. Kepler, for example, by classifying the successive positions in space of the planets, demonstrated that each moved in an ellipse, one of whose foci was occupied by the sun. Newton subsequently explained this fact by the construction of the law of gravity.

It must be carefully observed that we have spoken throughout of the relation of Freud's doctrines to Janet's conception of the subconscious, not to Janet's work as a whole. There can be no question that this larger relation is to a considerable extent one of conflict. But this conflict only arises when Janet leaves the phenomenal plane and proceeds to construct conceptual generalizations. Thus his views on the essential nature of hysteria and psychasthenia, the separation of the latter as a distinct entity, the origin of obsessions, and other similar points—these cannot be recon-

ciled altogether with the teaching of Freud. But whatever the ultimate verdict on these theories may be, Janet's indestructible monument will always be his vindication of the psychological method, his demonstration of the phenomena of dissociation, and a description of the facts of hysteria which has never been excelled in the history of psychiatry.

We are now in a position to summarize the results of our investigation: The word *subconscious* has been used by various authors to denote facts belonging to altogether different categories, and it is necessary in the interests of clearness that a terminology should be devised which will obviate this confusion. Excluding those speculative interpretations which do not enter into the field of science, these facts may be grouped under three heads. Firstly, the marginal elements of phenomenal consciousness (the *subconscious* of Stout), secondly, dissociated portions of phenomenal consciousness (the *co-conscious* of Morton Prince, and the *subconscious* of Janet), thirdly, a non-phenomenal conceptual construction designed to explain the facts of phenomenal consciousness (the *unconscious* of Freud). All these form part of the ma-

terial of psychology, none of them form part of the material of physiology.

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